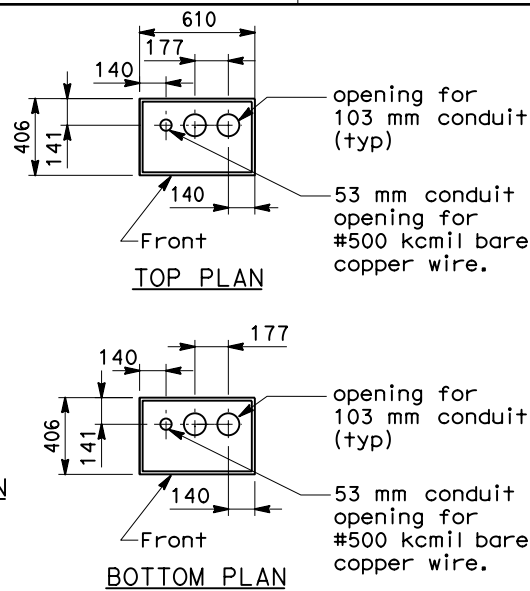
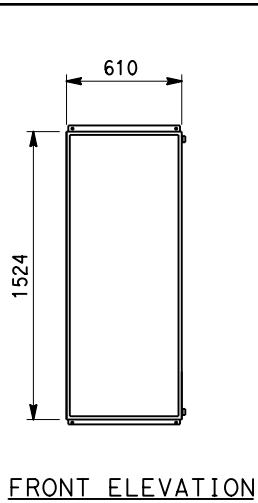
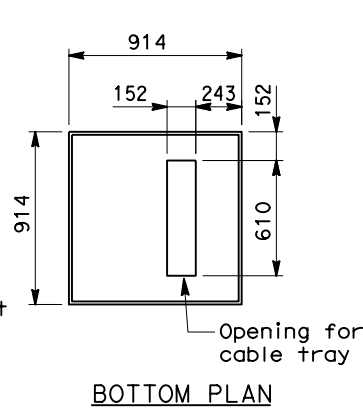
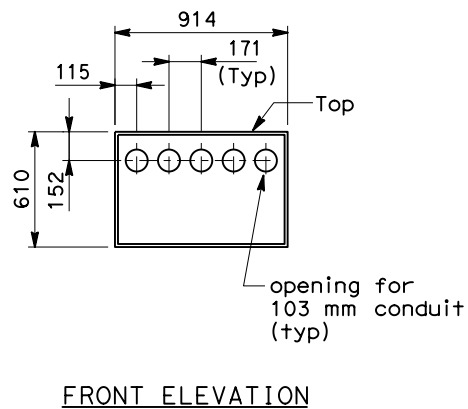


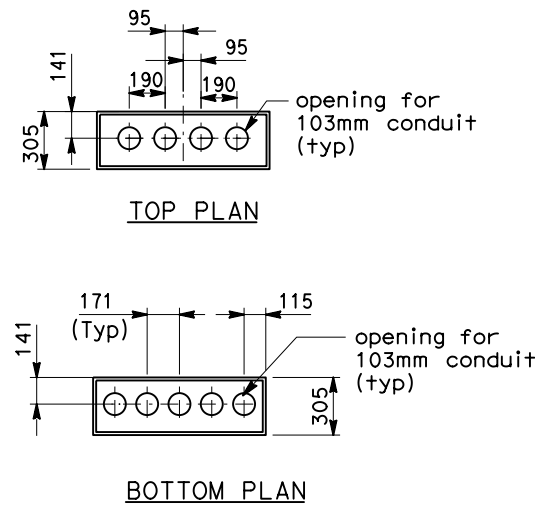
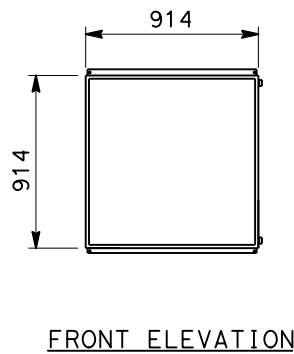
12.47 KV PULL BOX A1 1 2 3
TOP ACCESS
SCALE 1:20



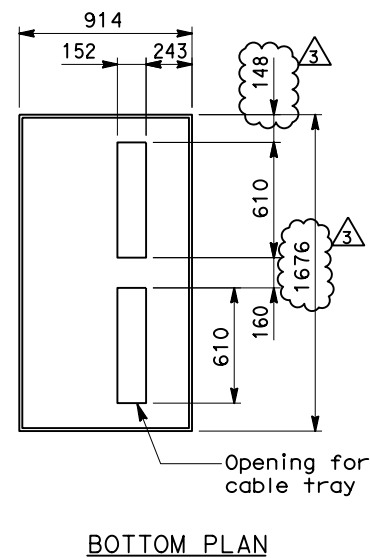
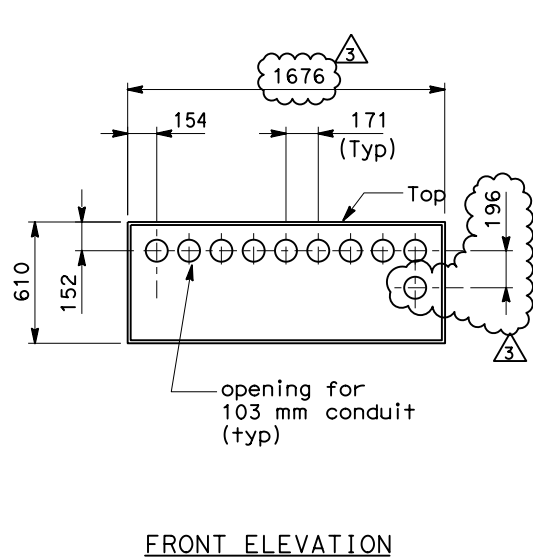
12.47 KV PULL BOX B1 1 2 3
FRONT ACCESS
SCALE 1:20



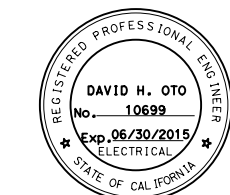
NON-CALTRANS PULL BOX A5 1 2 3
(FOR TOS/COM PULL BOX A4)
TOP ACCESS
SCALE 1:20



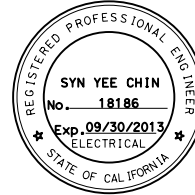
NON-CALTRANS PULL BOX B5 1 2 3
(FOR 600 V PULL BOX B2)
(FOR 600 V PULL BOX B3)
(FOR TOS/COM PULL BOX B4)
FRONT ACCESS
SCALE 1:20



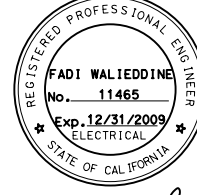
600V PULL BOX A23 1 2 3
TOP ACCESS
SCALE 1:20



FOR REVISION ONLY
3



FOR REVISION ONLY
2



FOR REVISION ONLY
1



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST PROJECT	SHEET NO	TOTAL SHEETS
04	SF	80	13.2/13.9		104 S3R3	1204
REGISTERED ELECTRICAL ENGINEER DATE 2/22/08						
PLANS APPROVAL DATE						
PB AMERICAS, Inc. A Parsons Brinckerhoff Company 303 Second St., Suite 700N San Francisco, CA 94107-1317						
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NOTES:

1. Pull Box shall be fabricated of Nema 4X stainless steel, type 304.
2. Provide pad lock for each pull box.
3. Provide nameplate description.

SHEET NOTES:

- 1 For pull box location see drawings E-21, E-21A, E-21B & E-21F.
- 2 Contractor shall verify all the dimensions prior to start work.
- 3 Provide breather and drain fitting at the bottom of each pull box.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
3	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191S2
2	05/25/12	SAS/SKYWAY MISCELLANEOUS ELECTRICAL CHANGES	TW	RG	191
1	11/20/09	ELECTRICAL GROUNDING	RR	RG FW	75
1	02/25/08	CABLE TRAY CHANGES	TW	RG SE	42S1

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

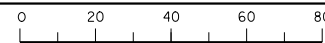
DETAILS
UNDERGROUND
PIER W2E PLANS AND SECTIONS
SCALE AS NOTED

E-21C

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SCALE IS IN MILLIMETERS



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CU 04251

EA 0120F1

DATE PLOTTED => 21-OCT-2013
TIME PLOTTED => 16:51
LAST REVISION 10-23-13



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	SF	80	13.2/13.9		104 S4R3	1204

REGISTERED ELECTRICAL ENGINEER DATE 2/22/08

PLANS APPROVAL DATE

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SHEET NOTES:

- For pull box sizes and opening see E-21C.
- For pull box location see E-21.
- Do not secure flexible conduit at this location.
- Hardwares and components are for strut channels.
- All liquidtight flexible metal conduit (LFMC) shall have #2 AWG bare copper wire inside that bonded to the grounding bushing whether shown on the drawings or not. Bond conduit bushings together and to the metallic enclosures. For similar bonding jumpers, see Detail 7, sheet E-196A.

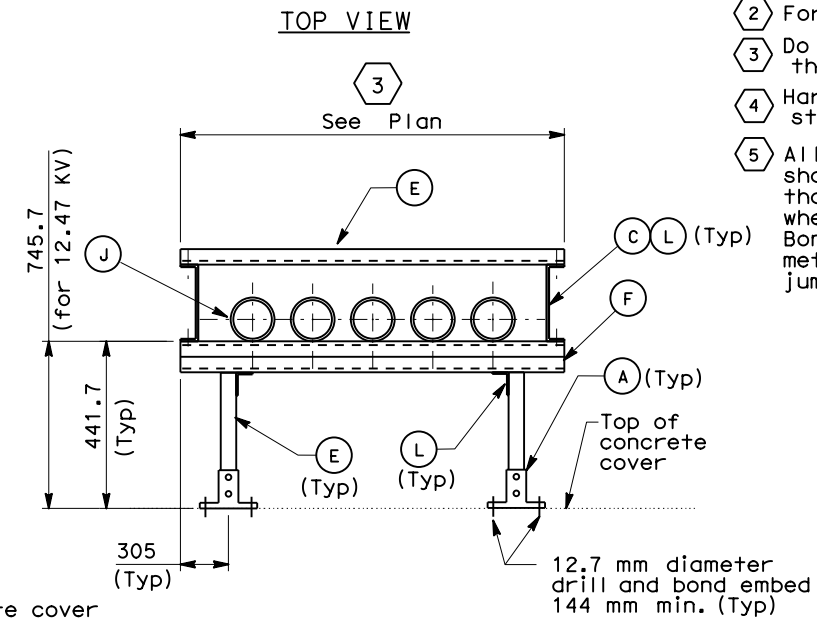
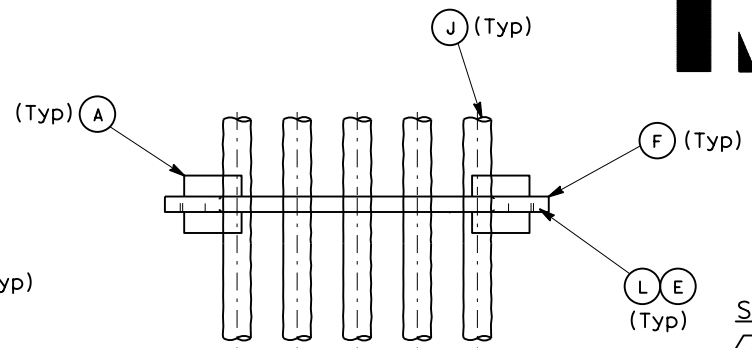
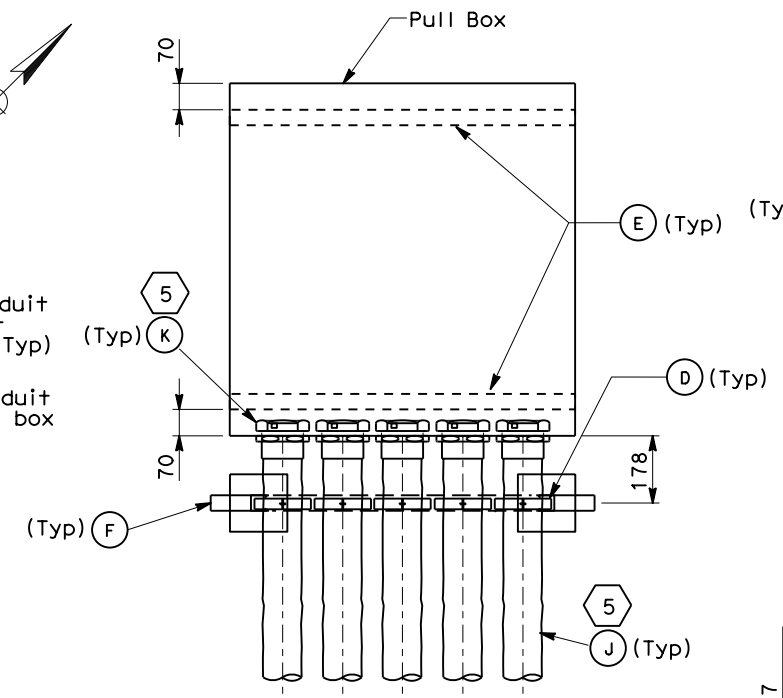
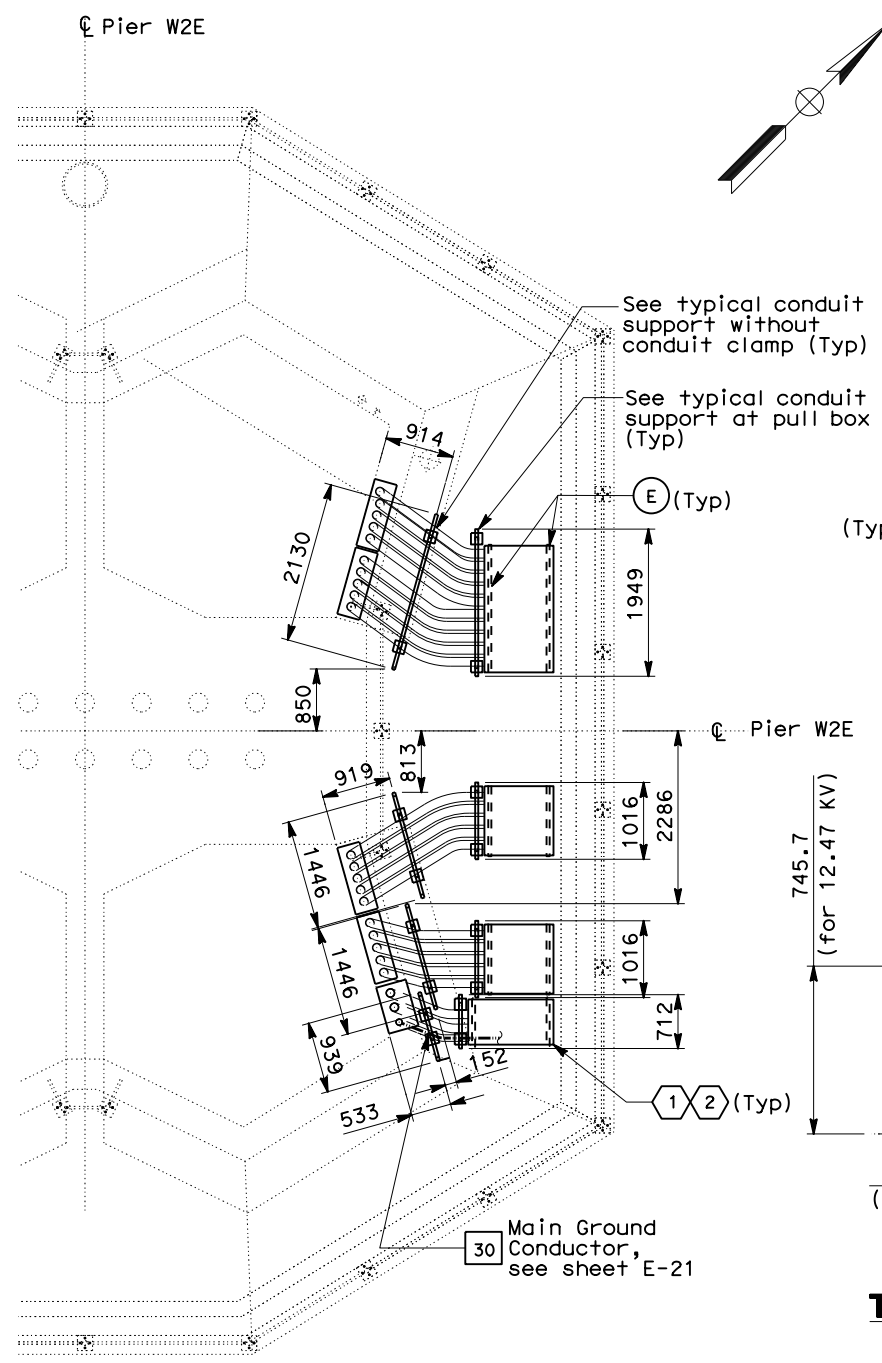
MATERIAL LIST		
Item No.	Description	
4 A	Strut Post Base 152 mm x 152 mm.	
B	Not used	
4 C	Strut channel spring nut, lockwasher and hex bolt (41mm)	
4 D	Strut channel conduit clamp for 103 mm	
4 E	Strut channel 41 mm x 41 mm	
4 F	Double strut channel 41.3 mm x 82.6 mm	
G	Not used	
H	Not used	
J	Liquidtight flexible metal conduit, 103 mm	
K	Liquidtight Insulated flexible metal conduit connector with insulated grounding bushing for 103 mm conduit	
4 L	203 mm U-shape fitting	

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
3	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR RSB	RG	19152
2	05/25/12	SAS/SKYWAY MISCELLANEOUS ELECTRICAL CHANGES	TW	RG	191
1	11/20/09	ELECTRICAL GROUNDING	RR AWG	RG FW	75
0	02/25/08	CABLE TRAY CHANGES	TW	RG SE	4251
MARK	DATE	DESCRIPTIONS	BY CH'D CCO#		

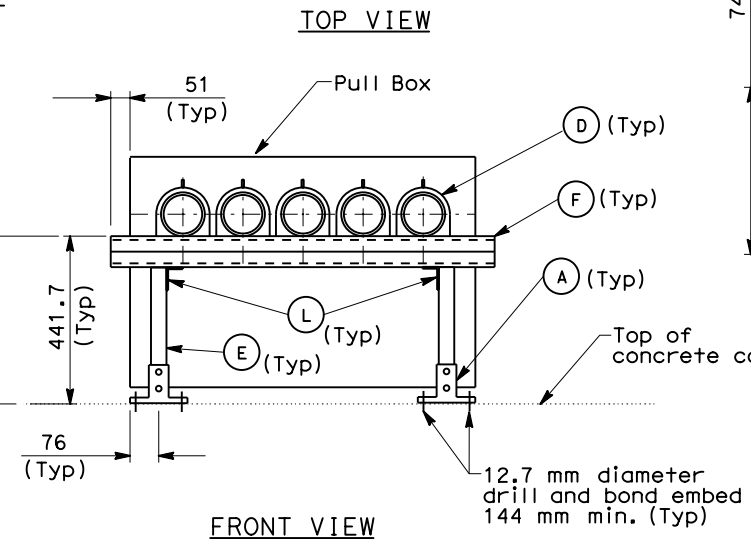
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SHEET _____ OF _____

DETAILS
UNDERGROUND
PIER W2E PLANS AND SECTIONS
SCALE AS NOTED

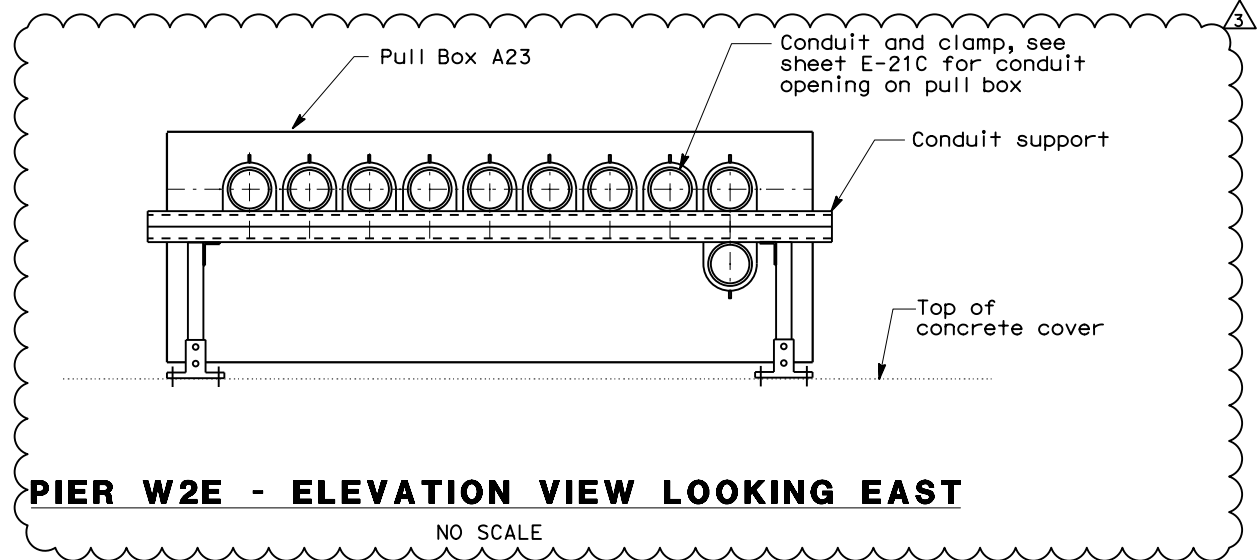
E-21D



TYPICAL CONDUIT SUPPORT
WITHOUT CONDUIT CLAMP
NO SCALE



TYPICAL CONDUIT SUPPORT
AT PULL BOX
NO SCALE



PIER W2E - ELEVATION VIEW LOOKING EAST
NO SCALE

CONDUIT SUPPORT AT GRADE

PLAN AT PIER W2E
SCALE 1:50

FOR REVISION ONLY

FOR REVISION ONLY

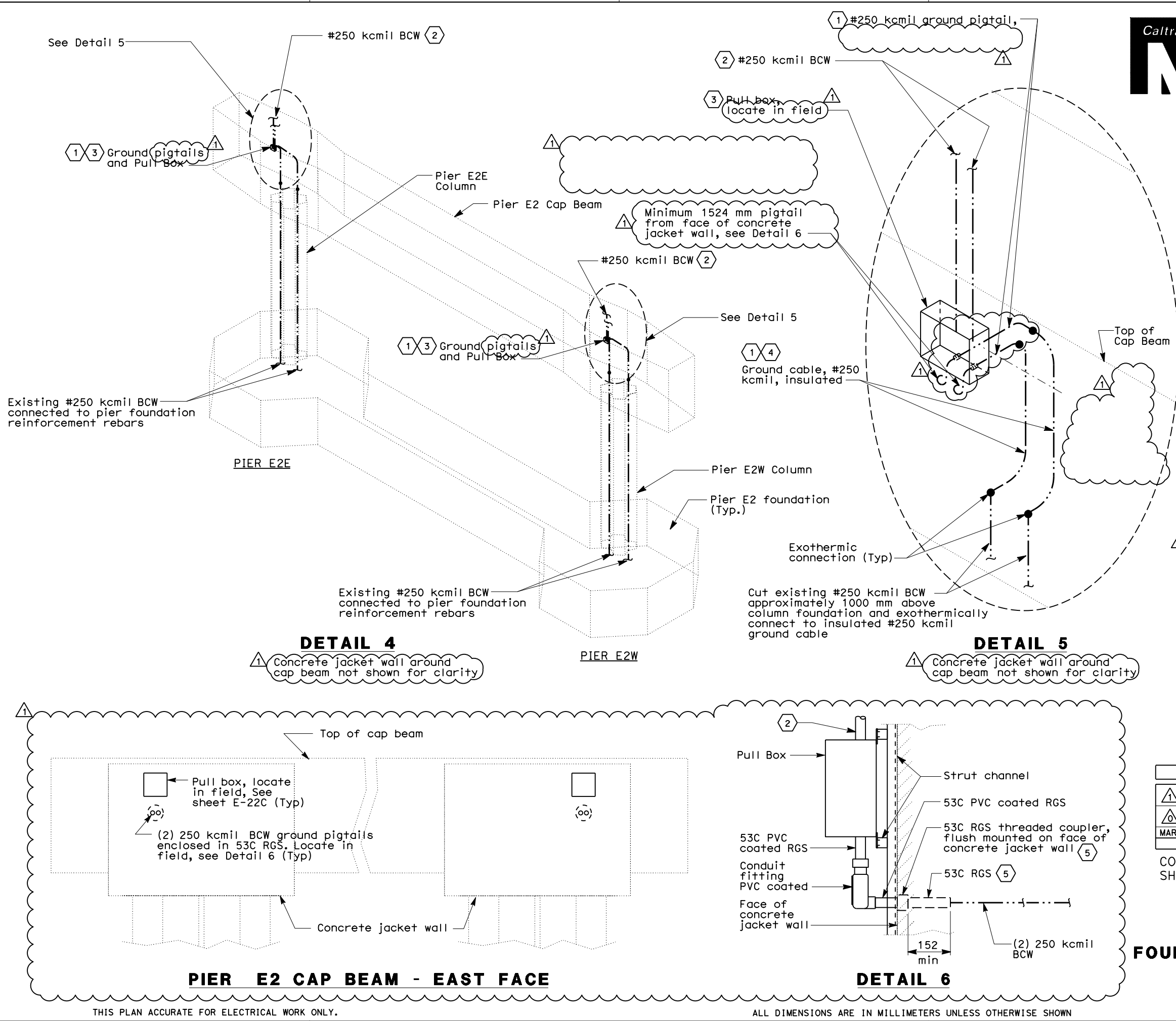
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USERNAME =>Llorico



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04	SF	80	13.2/13.9	105	1204	

8/11/08

REGISTERED ELECTRICAL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER

FADI WALIEDDINE

No. 11465

Exp. 12/31/2009

ELECTRICAL

STATE OF CALIFORNIA

PLANS APPROVAL DATE

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A Parsons Brinckerhoff Company

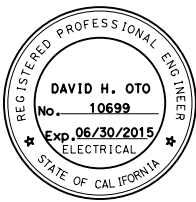
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- NOTES:
- 1 Cut-off existing ground plates and exothermically connect #250 kcmil BCW pigtail cables (2 per column) to the existing #250 kcmil BCW that are stub-up above the pier column. Route the ground cable within the cap beam avoiding any interference with E2 shear key saddle assembly or PT ducts. Secure cable to inside of vertical rebar cage. Contractor to verify ground cable length to suit field condition.
 - 2 Enclose the #250 kcmil BCW in liquidtight flexible metal conduit when routing up to OBG for connection to #500 kcmil main ground conductor. Typical for Westbound and Eastbound, see sheets E-111 and E-196 respectively.
 - 3 Pull box shall be 305 x 305 x 154 stainless steel NEMA 4X enclosure, Hoffman #A-1212CHNFSS6 or equal. Box shall be mounted to face of concrete jacket wall. Place Neoprene gasket between box and concrete face to inhibit moisture encrosion.
 - 4 Seal exposed bare copper wire (BCW) and exothermic connections with heavy duty splicing tape and vinyl electrical tape.
 - 5 Conduit and threaded coupler shall be located to avoid any interference with PT ducts, jacket wall reinforcement or other embedded structural elements.



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REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE						
1	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR RSB	RG	191	S2
0	11/20/09	ELECTRICAL GROUNDING	RR AWG	RG FW	75	
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#	
REVISIONS						

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

DETAILS
UNDERGROUND
FOUNDATION GROUNDING
NO SCALE

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DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		105 S03	1204

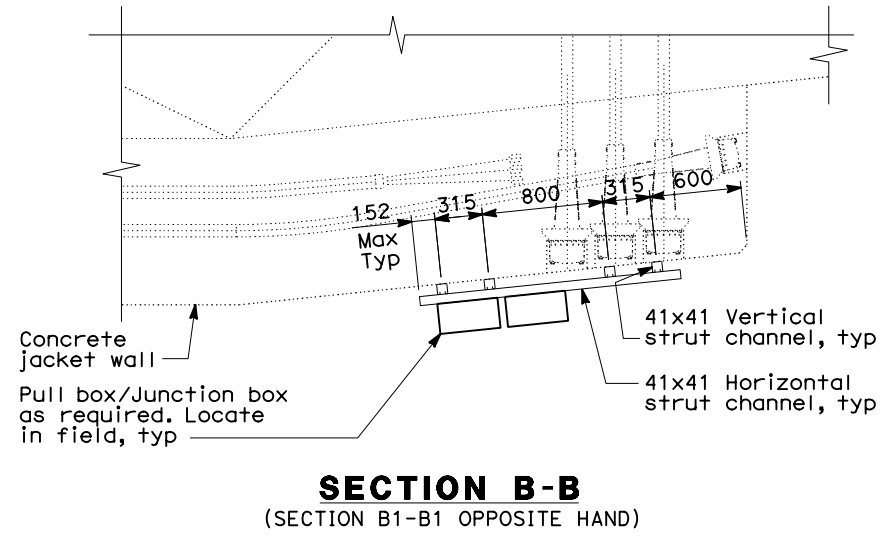
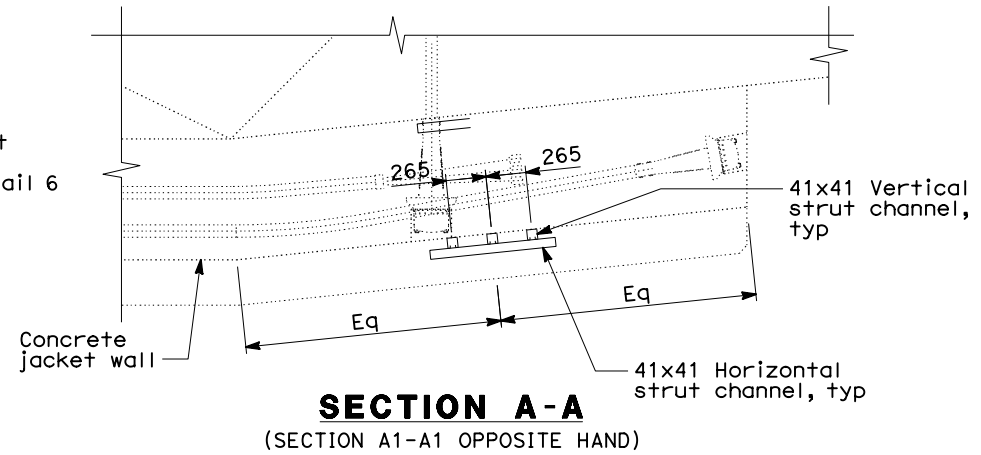
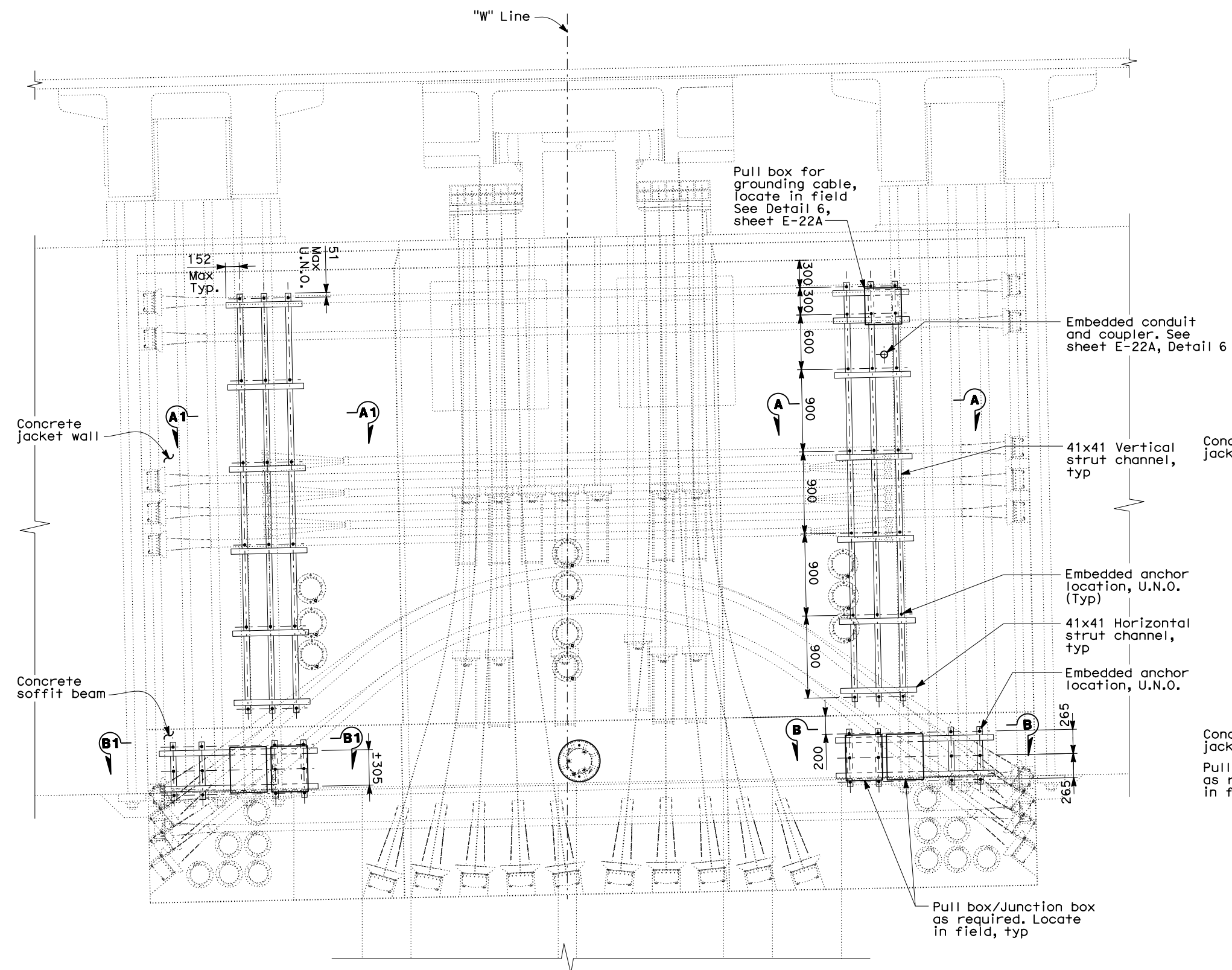
10/23/13
REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE _____


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PIER E2 ELEVATION
EAST FACE - LOOKING WEST, "W" LINE STATION
"E" LINE, SIMILAR

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE							
	10/28/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES			RG	DO	191S2
MARK	DATE	DESCRIPTIONS			BY	CH'D	CCO#
REVISIONS							

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

- SHEET NOTES:**
- 1 Dimensions are measured along lines perpendicular to the top face of Pier E2.
- NOTES:**
- 1. All embedded anchors and channel struts shall be hot-dipped galvanized.

**DETAILS
UNDERGROUND
FOUNDATION GROUNDING**
NO SCALE

E-22C

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0 20 40 60 80

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DATE PLOTTED => 29-OCT-2013
TIME PLOTTED => 09:31
LAST REVISION
10-28-13



DIST

COUNTY

ROUTE

KILOMETER TOTAL PROJECT

POST TOTAL PROJECT

SHEET NO

TOTAL SHEETS

04

SF

80

13.2/13.9

150 R3

1204

12/19/02

REGISTERED ELECTRICAL ENGINEER DATE

12-6-04

PLANS APPROVAL DATE

PB POWER, Inc.

A Parsons Brinckerhoff Company

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San Francisco, CA 94107-1317

12/19/02

REGISTERED PROFESSIONAL ENGINEER

JENS ERLINGSSON

No. 8249

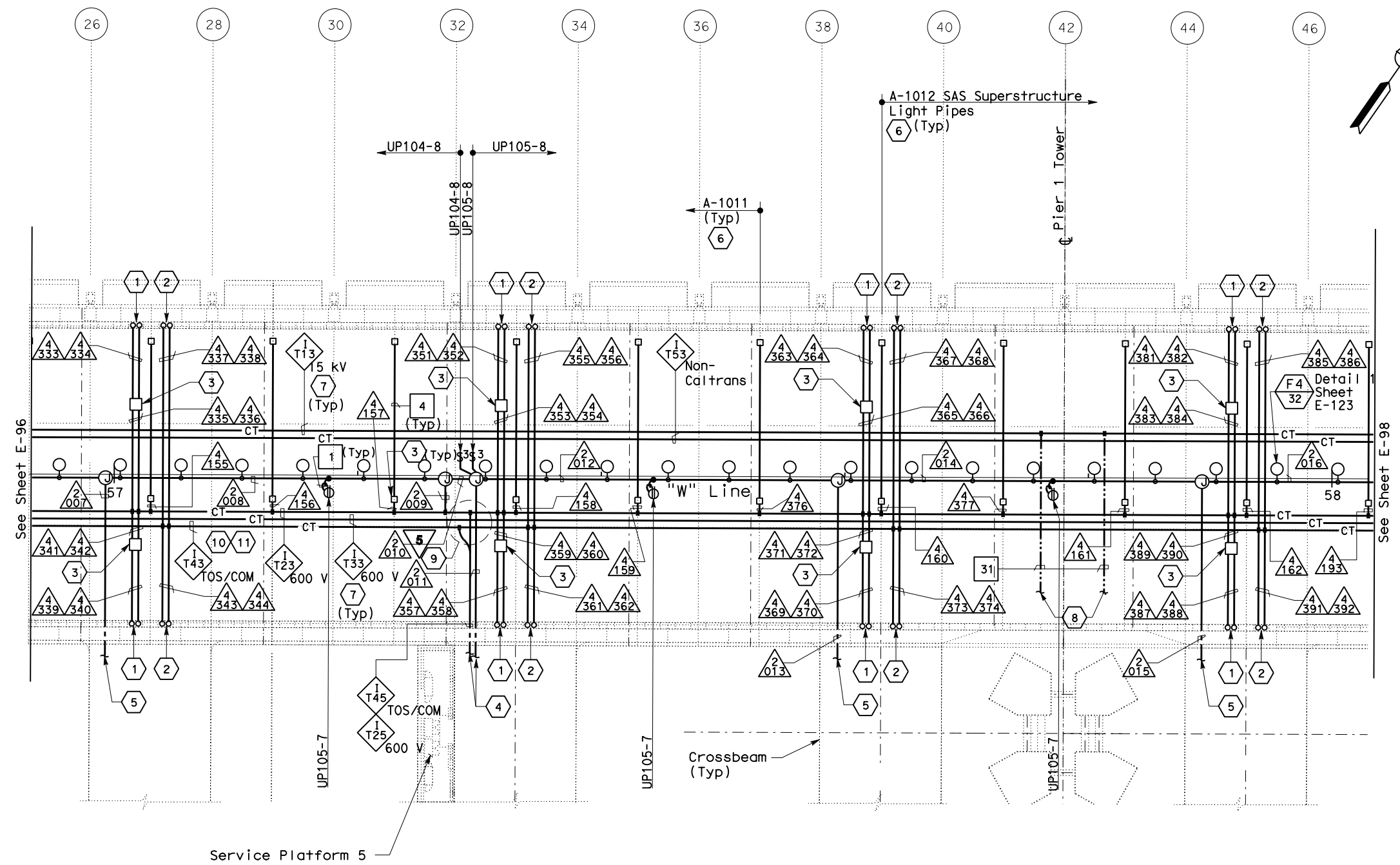
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- SHEET NOTES:
- 1

Conduit up to PB-LTG located in barrier, see sheet E-47.
- 2

Conduit up to PB-COM located in barrier, see sheet E-47.
- 3

PB-2A locate on top of floor.
- 4

For cable tray run and lighting inside crossbeam, see sheet E-115.
- 5

For lighting inside crossbeam, see sheet E-119.
- 6

PB-2L with circuit for future light pipes. See sheet E-121 for installation details and E-130 for lighting schedule.
- 7

For cable tray & ground bar support, refer to sheet E-125.
- 8

250 kcmil copper grounding conductor exothermically welded to 500 kcmil system grounding conductor. Route 250kcmil BCW in 40C 1/2 liquidtight flexible metal conduit. For continuation, see sheet E-111A.
- 9

For fiber splice tray detail, refer to sheet E-355.
- 10

Furnish and install 1-25.4 mm innerduct per BASE fiber optic cable in TOS/COM cable tray.
- 11

Furnish and install BASE fiber optic cable in innerduct. See sheet E-1100.

- NOTES:
1.

References:
 - TOS equipment is shown for conduit routing only. For typical details of TOS controller and devices, see sheets E-344 through E-357.
 - For types of pull boxes, splice boxes and enclosures, see sheet E-83.
 - For bridge grounding plan, see sheet E-111.
 - For circuit and conduit/cable tray schedules, see sheets starting at E-401.
2.

For other related work not shown on this sheet, see Electrical Special Provisions.
3.

The girder lighting fixtures are shown diagrammatically. Contractor shall install fixtures at railing posts with a maximum of 8000 mm between fixtures. For types and typical lighting fixture installation details, see sheet E-123.
4.

The cable trays are shown diagrammatically. For typical girder cable tray plans and sections, see sheets E-124 and E-125.

SAS SUPERSTRUCTURE - CONDUIT AND CABLE TRAY PLAN

REGISTERED PROFESSIONAL ENGINEER

SYN YEE CHIN

No. 18186

Exp. 09/30/2011

ELECTRICAL

STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER

DAVID H. OTO

No. 10699

Exp. 06/30/2013

ELECTRICAL

STATE OF CALIFORNIA

Syn Yee Chin

FOR REVISION ONLY

David H. Oto

FOR REVISION ONLY

1

2

3

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
3	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR RSB	RG	191S2
2	04/27/12	ELECTRICAL GROUNDING	RSB RM	RG	75
1	03/01/11	BASE INTEGRATION	RSB WB	150	
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
REVISIONS					

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

SAS SUPERSTRUCTURE GIRDER WESTBOUND
LIGHTING AND ELECTRICAL SYSTEMS
SCALE 1:200

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN OVERSIGHT

BEHZAD GOLEMOHAMMADI

REVISOR

DATE

REVISION

BY

DATE

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04	SF	80	13.2/13.9		154 R6	1204

Jens Erlingsson

12/19/02

REGISTERED ELECTRICAL ENGINEER DATE

12-6-04

PLANS APPROVAL DATE

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A Parsons Brinckerhoff Company

303 Second St., Suite 700N

San Francisco, CA 94107-1317

REGISTERED PROFESSIONAL ENGINEER

JENS ERLINGSSON

No. 8249

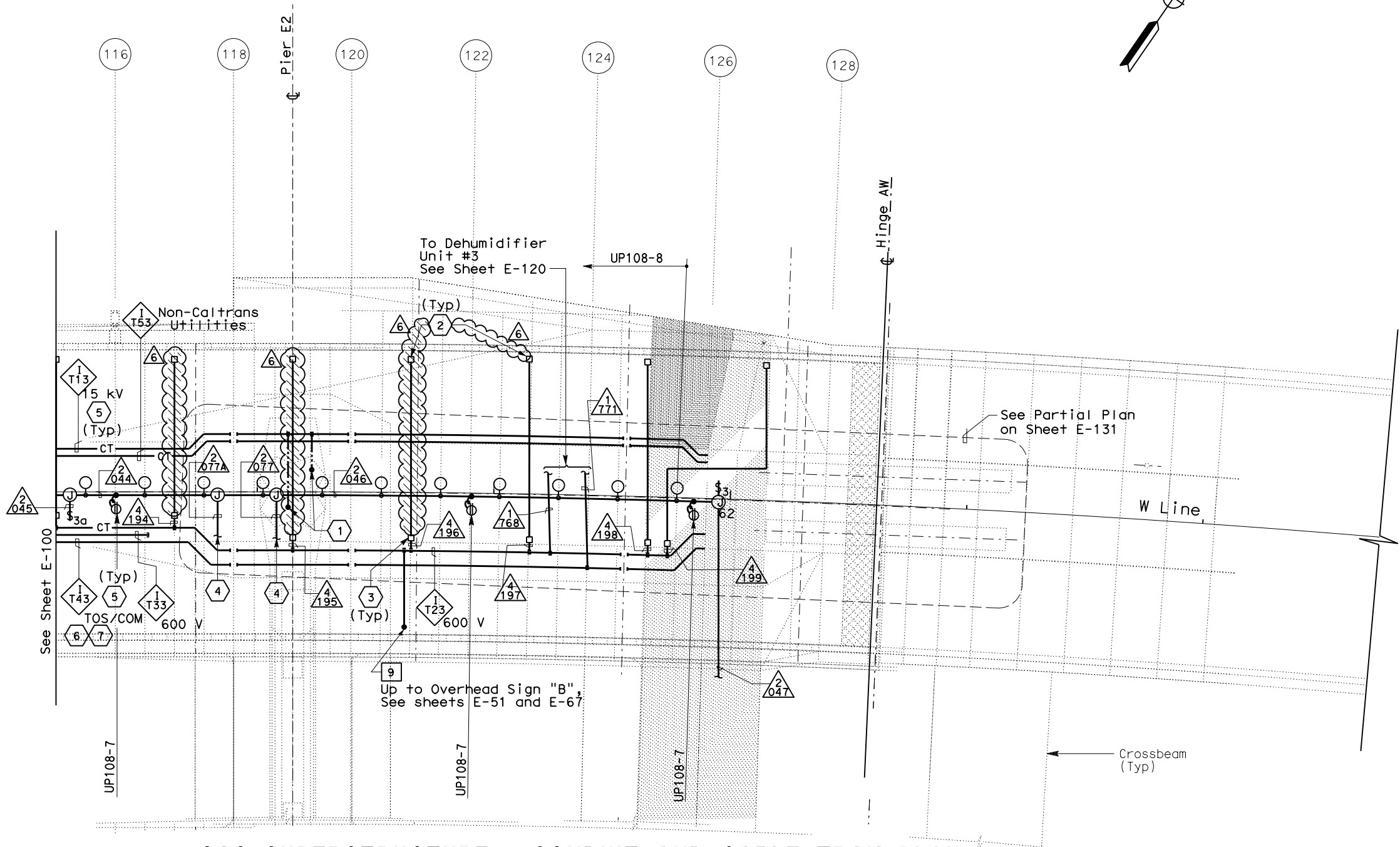
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SAS SUPERSTRUCTURE - CONDUIT AND CABLE TRAY PLAN

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
6	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191S2
5	02/08/13	ADDITIONAL SAS/SKYWAY MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191S1
4	03/01/11	BASE INTEGRATION	RSB	WB	150
3	03/26/10	DEHUMIDIFIER SCADA INTERFACE	RR	RG FW	130
2	02/25/08	CABLE TRAY CHANGES	MP	RG SE	42S1
1	02/19/08	ELECTRICAL MODIFICATIONS	MP EL	RR	42
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
REVISIONS					

REGISTERED PROFESSIONAL ENGINEER

S. A. ESTOQUE, JR.

No. E-10151

Exp. 12/31/2008

ELECTRICAL

STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER

SYN YEE CHIN

No. 18186

Exp. 09/30/2011

ELECTRICAL

STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER

DAVID H. OTO

No. 10699

Exp. 06/30/2015

ELECTRICAL

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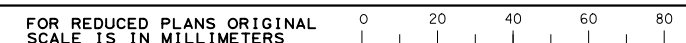
SAS SUPERSTRUCTURE GIRDER WESTBOUND LIGHTING AND ELECTRICAL SYSTEMS

SCALE 1:200

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SHEET _____ OF _____

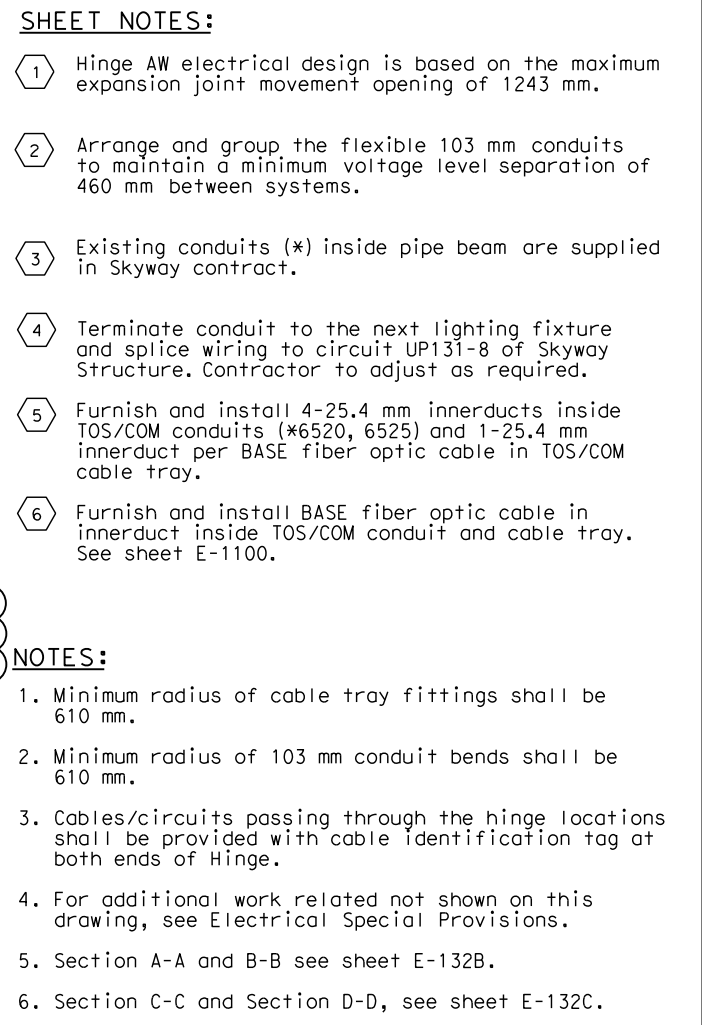
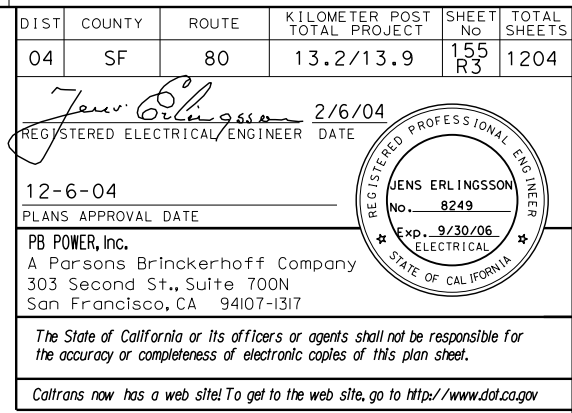
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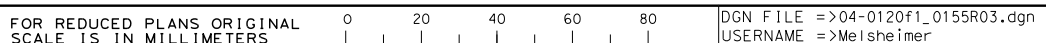
LAST REVISION	DATE PLOTTED => 3/29/2013
03-27-13	TIME PLOTTED => 10:35:54 AM

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**SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE
GIRDER INTERFACE WESTBOUND**

E-101A






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REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE						
	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR RSB	RG	19152	
	04/27/12	ELECTRICAL GROUNDING	RSB RM	RG	75	
	12/21/11	ELECTRICAL CHANGE FOR ELEVATION 53 IMPROVEMENTS	TW	RG	190	
	09/02/11	TOWER SUSPENDER CABLE & ELEVATOR	RM	TW	20351	
	11/20/09	ELECTRICAL GROUNDING	AG RR	RG	75	
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#	
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AT CENTERLINE OF PIPE BEAM
SCALE 1:75



SCALE 1:40



DETAIL 2



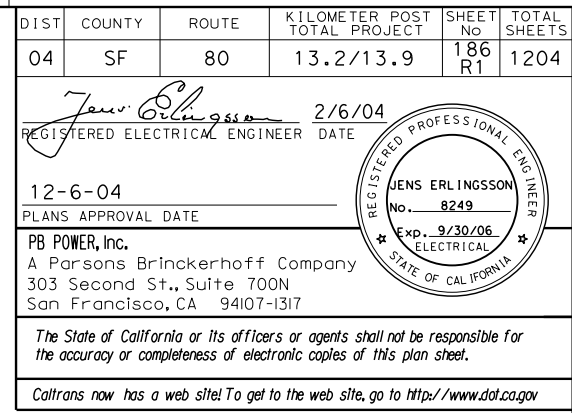
DETAIL 3



DETAIL 4



Item No.	Description
(A)	Strut channel 41 mm x 41 mm
(B)	Strut channel combination 41 mm x 82 mm
(C)	Strut channel spring nut, lockwasher and hex bolt
(D)	Strut channel conduit clamp for 103 mm
(E)	Conduit elbow for 103 mm (Radius= 610 mm)
(F)	Conduit elbow for 103 mm (Radius= 752 mm)
(G)	Conduit nipple, 103 mm
(H)	Conduit coupling, 103 mm
(J)	DELETED ¹
(K)	Connector, straight liquidtight flexible conduit for 103 mm
(L)	Liquidtight flexible conduit, 103 mm
(M)	Insulated bushed nipple for 103 mm conduit
(N)	Strain relief grips or AMTEC conduit riser grip for flexible conduit, 103 mm
(P)	Threaded steel hanger rod, 12 mm diameter ¹
(Q)	Cable tray vertical outside bend
(R)	Cable tray vertical inside bend
(T)	Strut channel spring nut, tee-head bolt
(U)	Strut channel cable tray clamp for ladder or solid bottom tray
(V)	Bracket for 82 mm X 82 mm Strut Channel
(W)	Vertical tray hanger with splice plate hardware (bolted to side rail)
(X)	130 Bolt thru T' stiffener web/platform support w/ nut and washer ¹

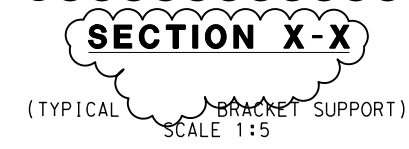


- 1 For seismic bracing, use strut channel installed diagonally to connect horizontal member of one hanger to horizontal member of adjacent hanger. See Sections A-A and B-B for connecting points.
- 2 For seismic bracing, use strut channel installed diagonally to connect horizontal member of tray support to adjacent support.

1. Materials, hardware and fittings shall be galvanized or stainless steel. For additional requirements, see Electrical Special Provisions.
2. References:
 - For plans and sections, see sheets E-101A and E-132A.

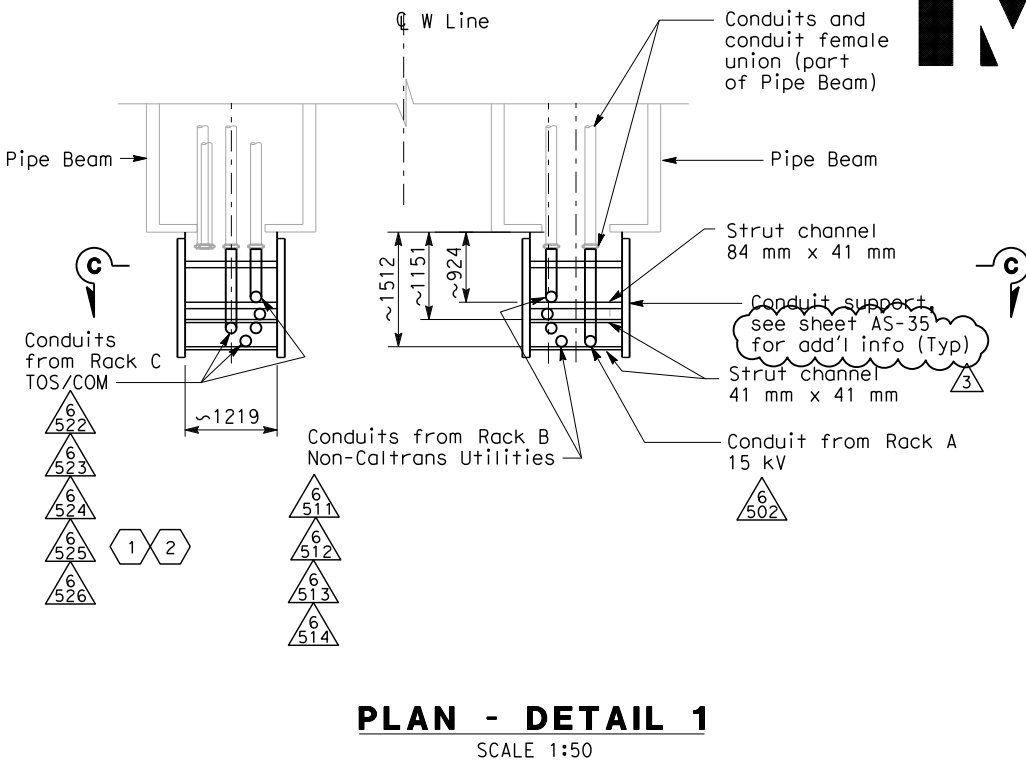
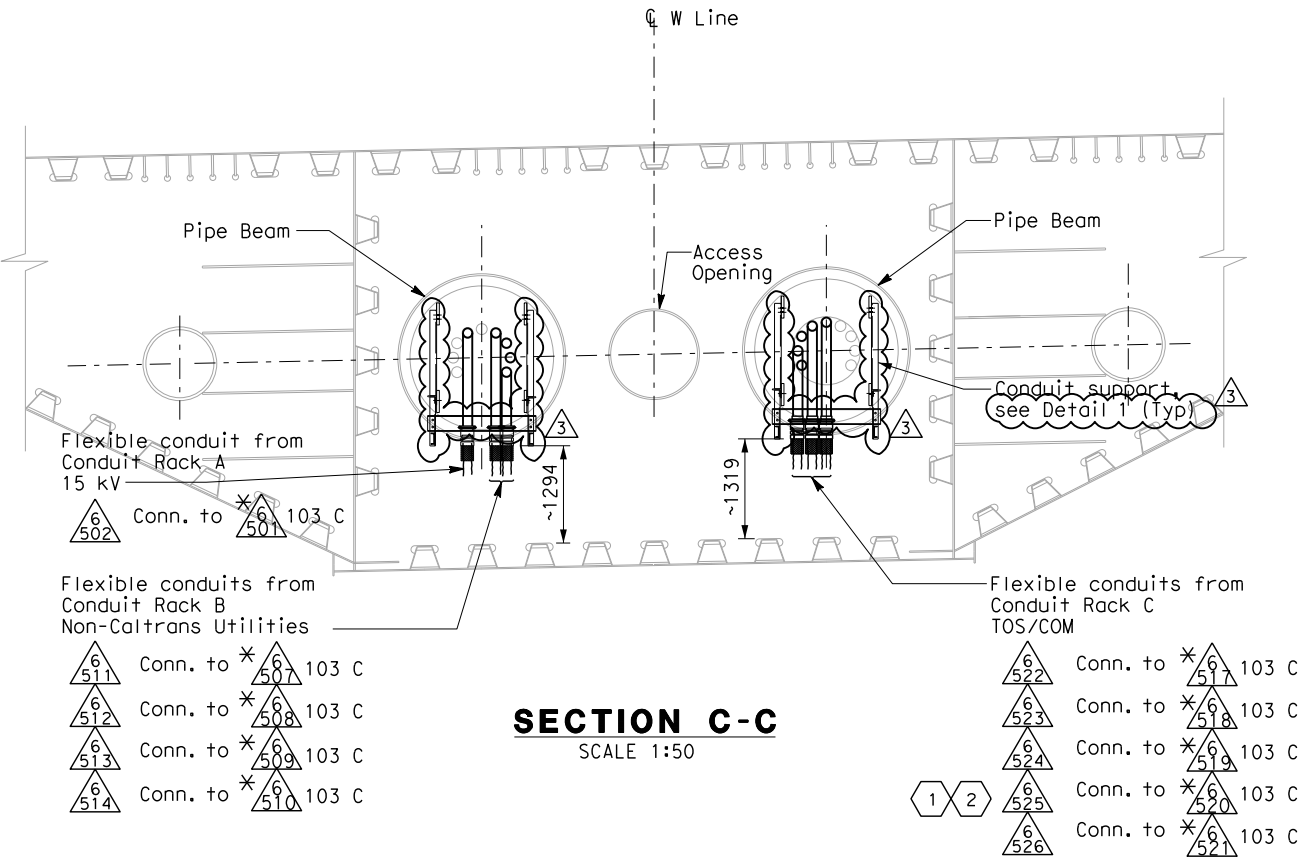
Item No.	Description	Remarks
(A)	Strut channel, 41 mm x 41 mm	Length as required
(B)	Strut channel, 41 mm x 82 mm	Length as required
(C)	Strut channel combination, 41 mm x 82 mm	Length as required
(D)	Strut wall bracket	
(E)	Threaded steel hanger rod, 12 mm diameter	Length as required
(F)	Strut channel spring nut, lockwasher and hex bolt	
(H)	Strut channel hanger trapeze hardware kit	
1 (J)	DELETED	
(K)	Strut channel brace fittings for horizontal seismic support	Length as required
(M)	Strut channel wing shape fitting	
1 (R)	DELETED	
(S)	Vertical tray hanger with splice plate hardware (Bolted to side rail)	

E-132B



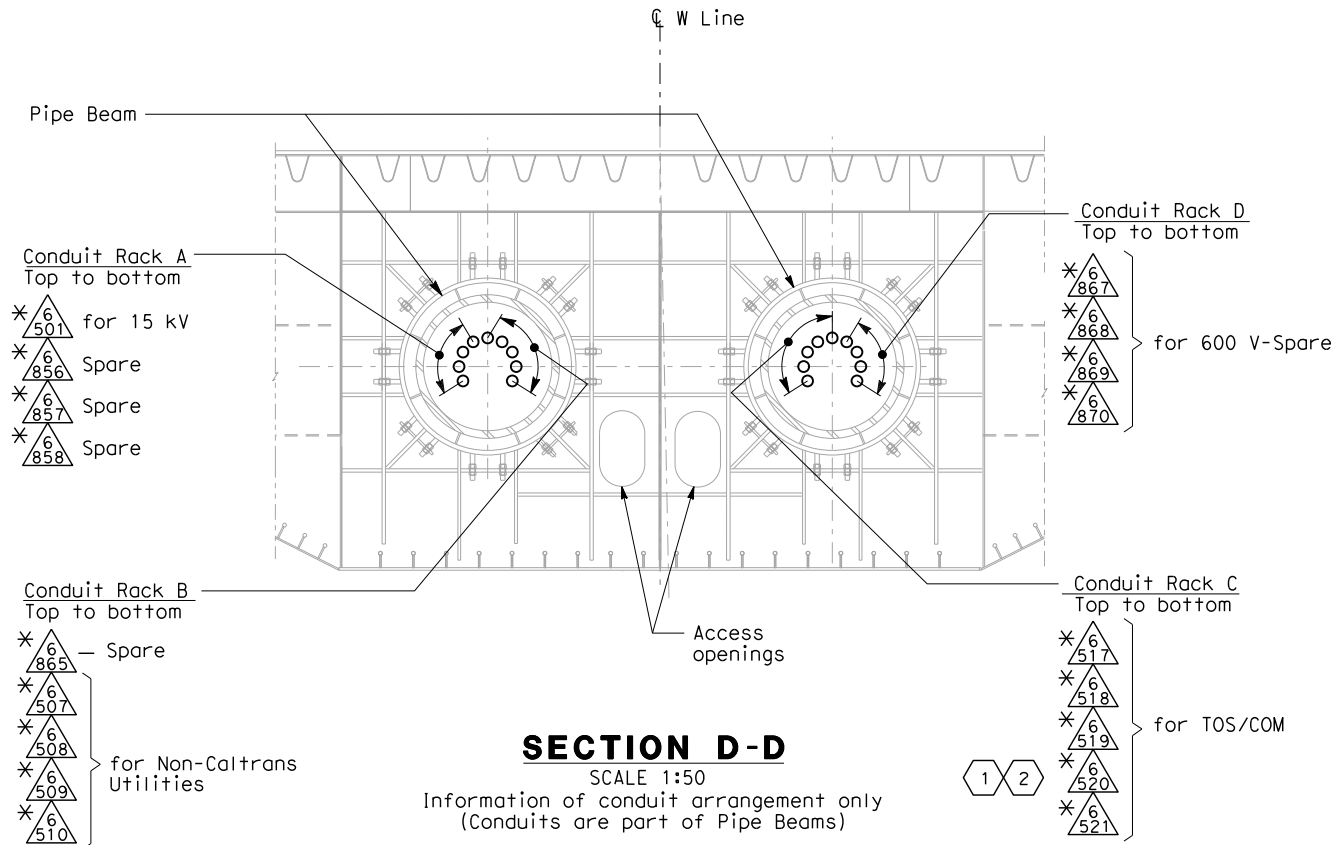
CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____





- NOTES:**
1. Materials, hardware and fittings shall be galvanized or stainless steel. For additional requirements, see Electrical Special Provisions.
 2. References:
- For Westbound plans and sections, see sheets E-101A and E-132A.
 3. Existing conduits (*) inside pipe beam are supplied in Skyway contract.

- SHEET NOTES:**
1. Furnish and install 4-25.4 mm innerducts inside TOS/COM conduits (*6520, 6525) and 1-25.4 mm innerduct per BASE fiber optic cable in TOS/COM cable tray.
 2. Furnish and install BASE fiber optic cable in innerduct inside TOS/COM conduit and cable tray. See sheet E-1100.



REGISTERED PROFESSIONAL ENGINEER
DAVID H. OTO
No. 10699
Exp. 06/30/2013
ELECTRICAL
STATE OF CALIFORNIA

FOR REVISION ONLY
3

REGISTERED PROFESSIONAL ENGINEER
SYN YEE CHIN
No. 18186
Exp. 09/30/2011
ELECTRICAL
STATE OF CALIFORNIA

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2

REGISTERED PROFESSIONAL ENGINEER
S. A. ESTOQUE, JR.
No. E-10151
Exp. 12/31/2008
ELECTRICAL
STATE OF CALIFORNIA

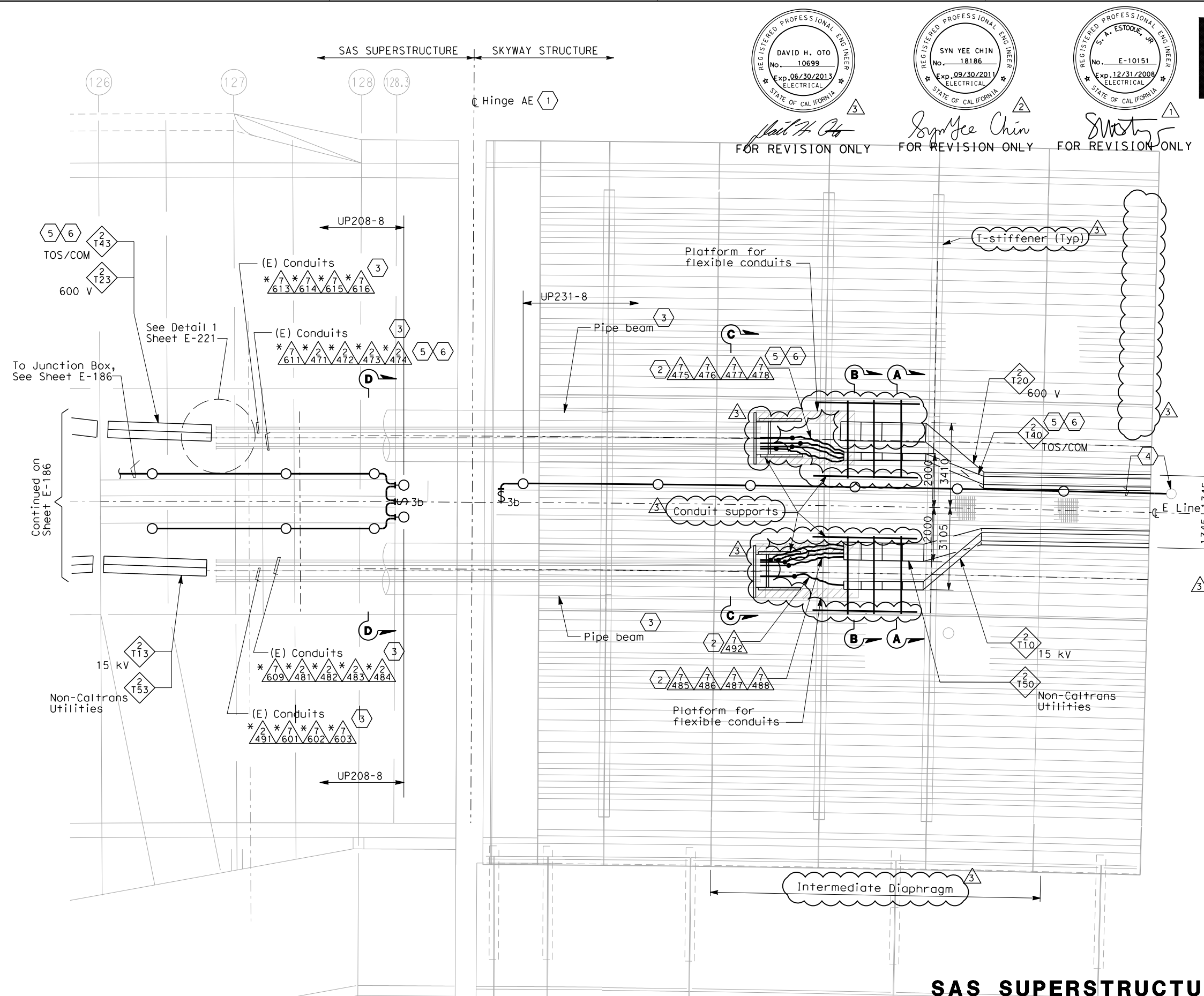
FOR REVISION ONLY
1

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
3	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RSB	RG 191S2
2	03/01/11	BASE INTEGRATION	RSB	WB	150
1	02/25/08	CABLE TRAY CHANGES	JD	RG SE	42S1
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
REVISIONS					

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

DETAILS
SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE
GIRDER INTERFACE WESTBOUND
HINGE AW SUPPORTS
SCALE AS NOTED

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.



PLAN

SCALE: 1:75

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

0 20 40 60 80

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USERNAME =>Meisheimer

DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	221 R3	1204	

12-6-04
PLANS APPROVAL DATE

PB POWER, Inc.
A Parsons Brinckerhoff Company
303 Second St., Suite 700N
San Francisco, CA 94107-1317

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SHEET NOTES:

- 1 Hinge AE electrical design is based on the maximum expansion joint movement opening of 1243 mm.
- 2 Arrange and group the flexible 103 mm conduits to maintain a minimum voltage level separation of 460 mm between systems.
- 3 Existing conduits(*) inside pipe beam are supplied in Skyway contract.
- 4 Terminate conduit to the next lighting fixture and splice wiring to circuit UP231-8 of Skyway Structure.
- 5 Furnish and install 4-25.4 mm innerducts inside TOS/COM conduits (*2474, 7478) and 1-25.4 mm innerduct per BASE fiber optic cable in TOS/COM cable tray.
- 6 Furnish and install BASE fiber optic cable in innerduct inside TOS/COM conduit and cable tray. See sheet E-1101.

NOTES:

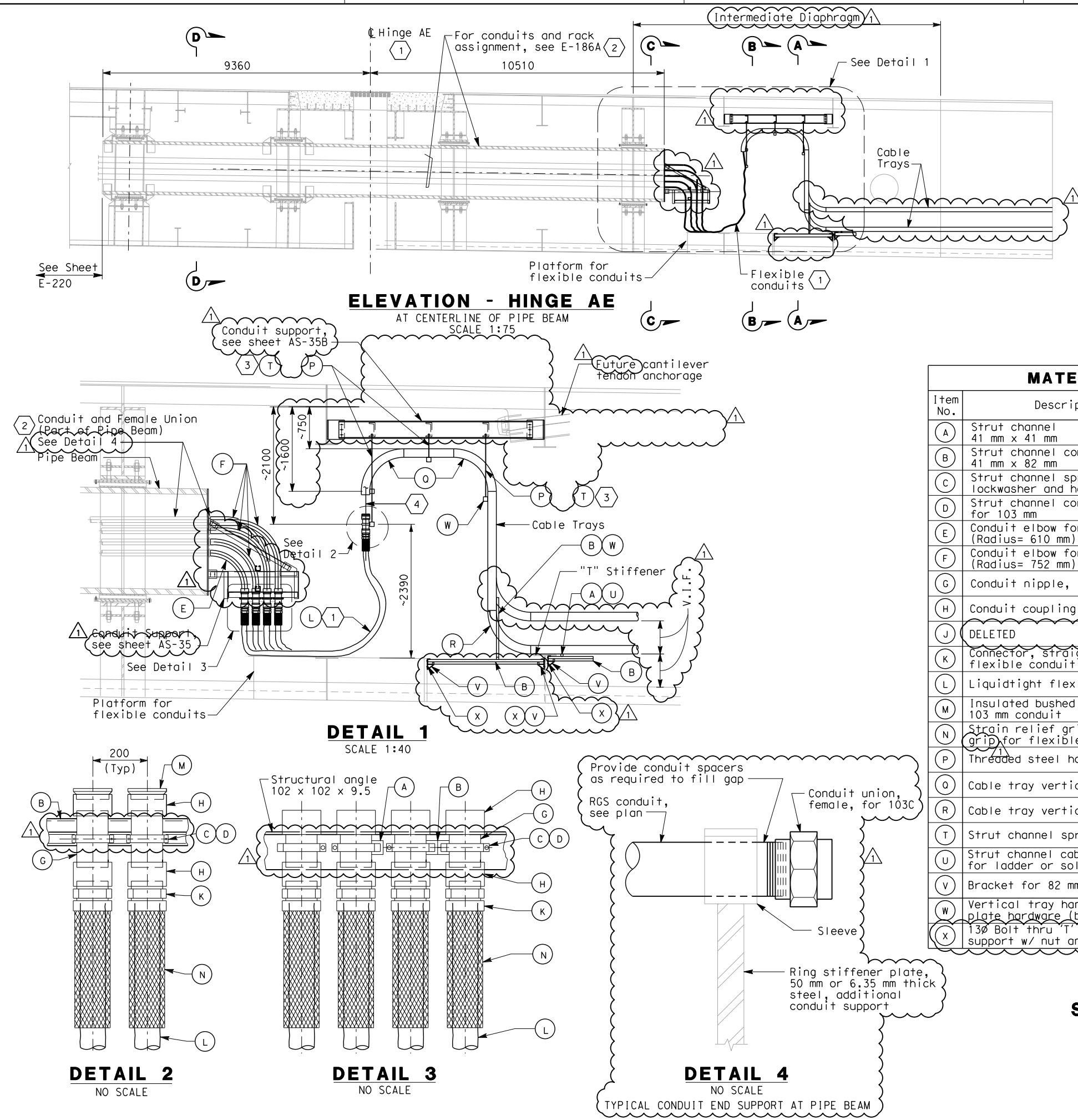
1. Minimum radius of cable tray fittings shall be 610 mm.
2. Minimum radius of 103 mm conduits bends shall be 610 mm.
3. Cables/circuits passing through the hinge locations shall be provided with cable identification tag at both ends of Hinge.
4. For additional work related not shown on this drawing, see Electrical Special Provisions.
5. Section A-A and B-B see sheet E-221B.
6. Section C-C and Section D-D, see sheet E-221C.

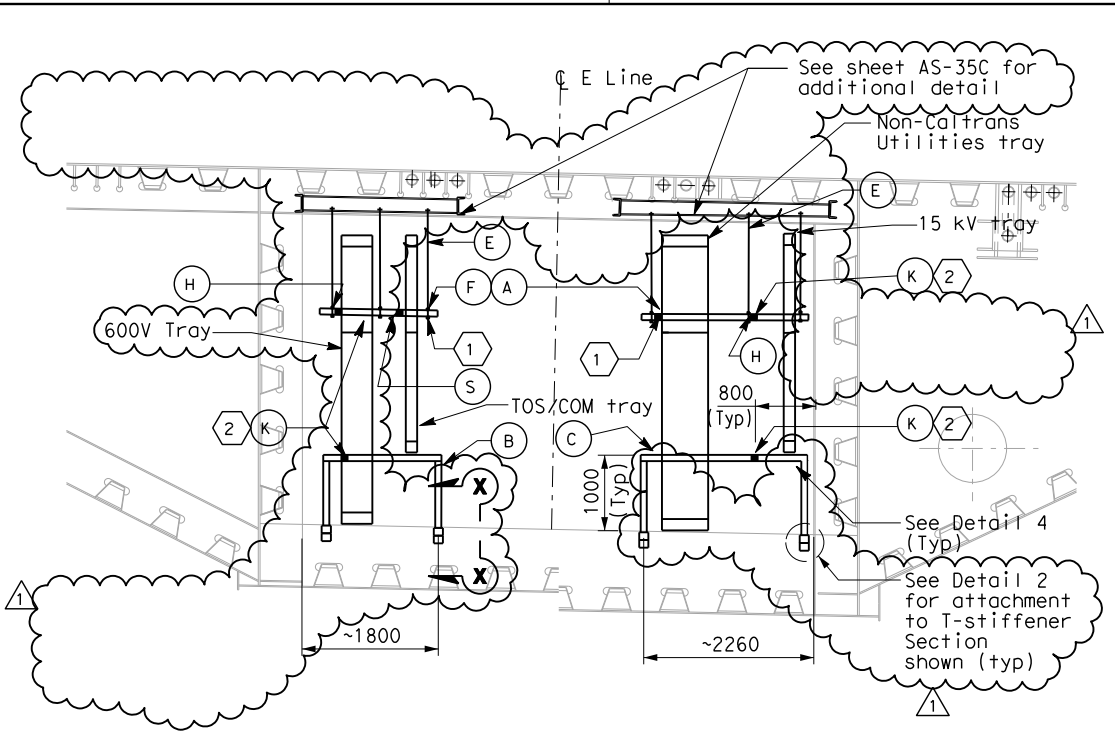
REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
3	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR RSB	RG	191S2
2	03/01/11	BASE INTEGRATION	RSB	WB	150
1	02/25/08	CABLE TRAY CHANGES	JD	RG SE	42S1
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
REVISIONS					

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

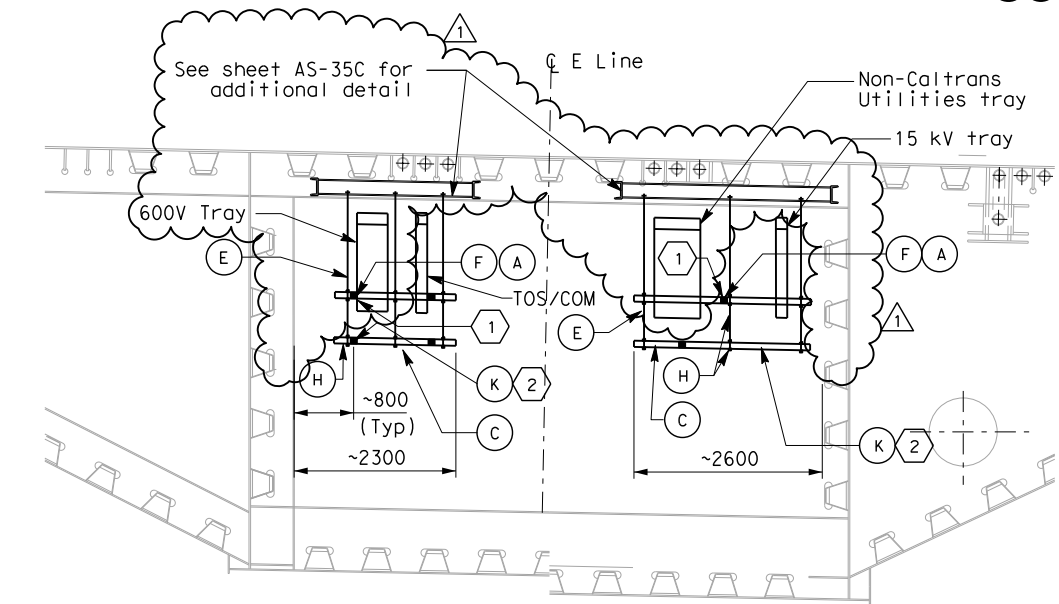
SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE
GIRDER INTERFACE EASTBOUND
AS NOTED

E-186A





SECTION A-A
SCALE 1:50

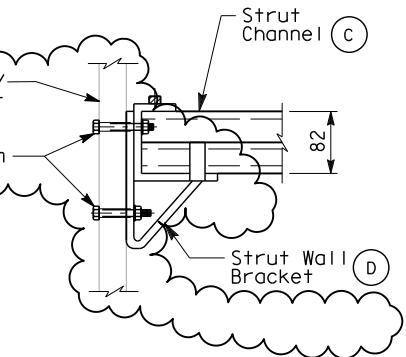


SECTION B-B
SCALE 1:50

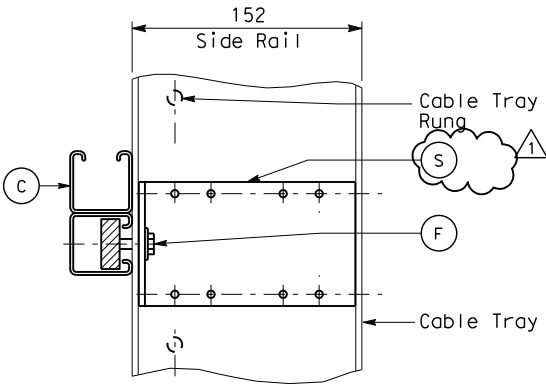
REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
1	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191S2
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
REVISIONS					

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

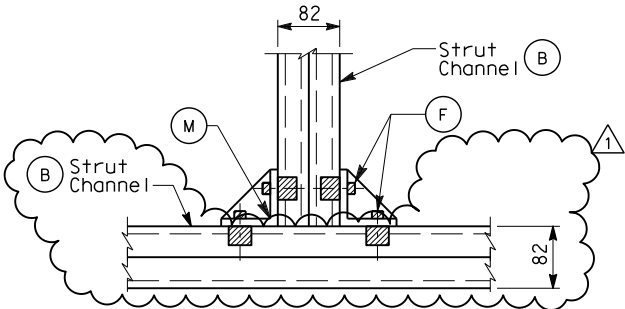
REGISTERED PROFESSIONAL ENGINEER
DAVID H. OTO
No. 10699
Exp. 06/30/2013
ELECTRICAL
STATE OF CALIFORNIA
FOR REVISION ONLY



DETAIL 2
(TYPICAL) BRACKET TRAY SUPPORT
SCALE 1:5



DETAIL 4
(TYPICAL) VERTICAL CABLE TRAY SUPPORT
SCALE 1:2.5



SECTION X-X
(TYPICAL) BRACKET SUPPORT
SCALE 1:5



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		242 R1	1204

REGISTERED ELECTRICAL ENGINEER
Jens Erlingsson
2/6/04
DATE

12-6-04
PLANS APPROVAL DATE

PB POWER, Inc.
A Parsons Brinckerhoff Company
303 Second St., Suite 700N
San Francisco, CA 94107-1317

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SHEET NOTES:

- 1 For seismic bracing, use strut channel installed diagonally to connect horizontal member of one hanger to horizontal member of adjacent hanger. See Sections A-A and B-B for connecting points.
- 2 For seismic bracing, use strut channel installed diagonally to connect horizontal member of tray support to adjacent support.

NOTES:

- 1. Materials, hardware and fittings shall be galvanized or stainless steel. For additional requirements, see Electrical Special Provisions.
- 2. References:
 - For plans and sections, see sheets E-186A and E-221A.

MATERIAL LIST		
Item No.	Description	Remarks
A	Strut channel, 41 mm x 41 mm	Length as required
B	Strut channel, 41 mm x 82 mm	Length as required
C	Strut channel combination, 41 mm x 82 mm	Length as required
D	Strut wall bracket	
E	Threaded steel hanger rod, 12 mm diameter	Length as required
F	Strut channel spring nut, lockwasher and hex bolt	
H	Strut channel hanger trapeze hardware kit	
J	DELETED	
K	Strut channel brace fittings for horizontal seismic support	Length as required
M	Strut channel wing shape fitting	
R	DELETED	
S	Vertical tray hanger with splice plate hardware (Bolted to side rail)	

DETAILS
SAS SUPERSTRUCTURE AND SKYWAY STRUCTURE
GIRDER INTERFACE EASTBOUND
HINGE AE TRAY SUPPORTS
SCALE AS NOTED

E-221B



NOTES:

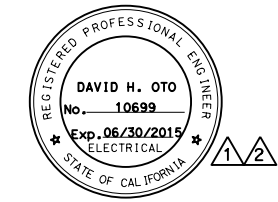
- References:
 - For utility panel UP-210 schedule, see sheet E-278.
 - For conduit and cable tray schedules, see sheets starting at E-401.
 - For lighting fixture schedule, see sheet E-273.
 - For vertical conduit runs support system, see sheet E-287.
 - For lighting installation details, see sheet E-267.
- All conduits and fittings routed exposed at grating shall be rigid galvanized steel, PVC coated, UNO.
- Fixture mounting height elevation shall be 2.125 m above floor/platform elevation UNO.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE						
2	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191	S2
1	01/25/12	ELECTRICAL CHANGES FOR ELEVATION 53 IMPROVEMENTS	TW	RG	190	
0	02/24/10	TOWER UTILITY PANELS	JS	RG	70	
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#	

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

SHEET NOTES:

- Bolt lengths to be long enough to fully engage all materials through which they pass, including all washers and nuts, and where attaching to structural steel be anchored in threads to a depth at least 1.2 times the bolt diameter. Holes in structural members shall be drilled and bottom tapped to 5 mm minimum deeper than the depth to which the bolt will engage the steel.
- 152 x 152mm, 316SS, Nema 4X wireway. with bracket hanger for mounting.
- 102 x 102mm, 316SS, Nema 4X wireway. with bracket hanger for mounting.
- Install #2 bare copper wire (bonding jumper) inside conduit and connect to conduit insulated grounding bushing and to enclosure grounding terminal. Use servit post Burndy Type KC or equal inside bottom of the enclosure when no factory grounding terminal is provided. See Detail 8, sheet E-111B for similar installation.

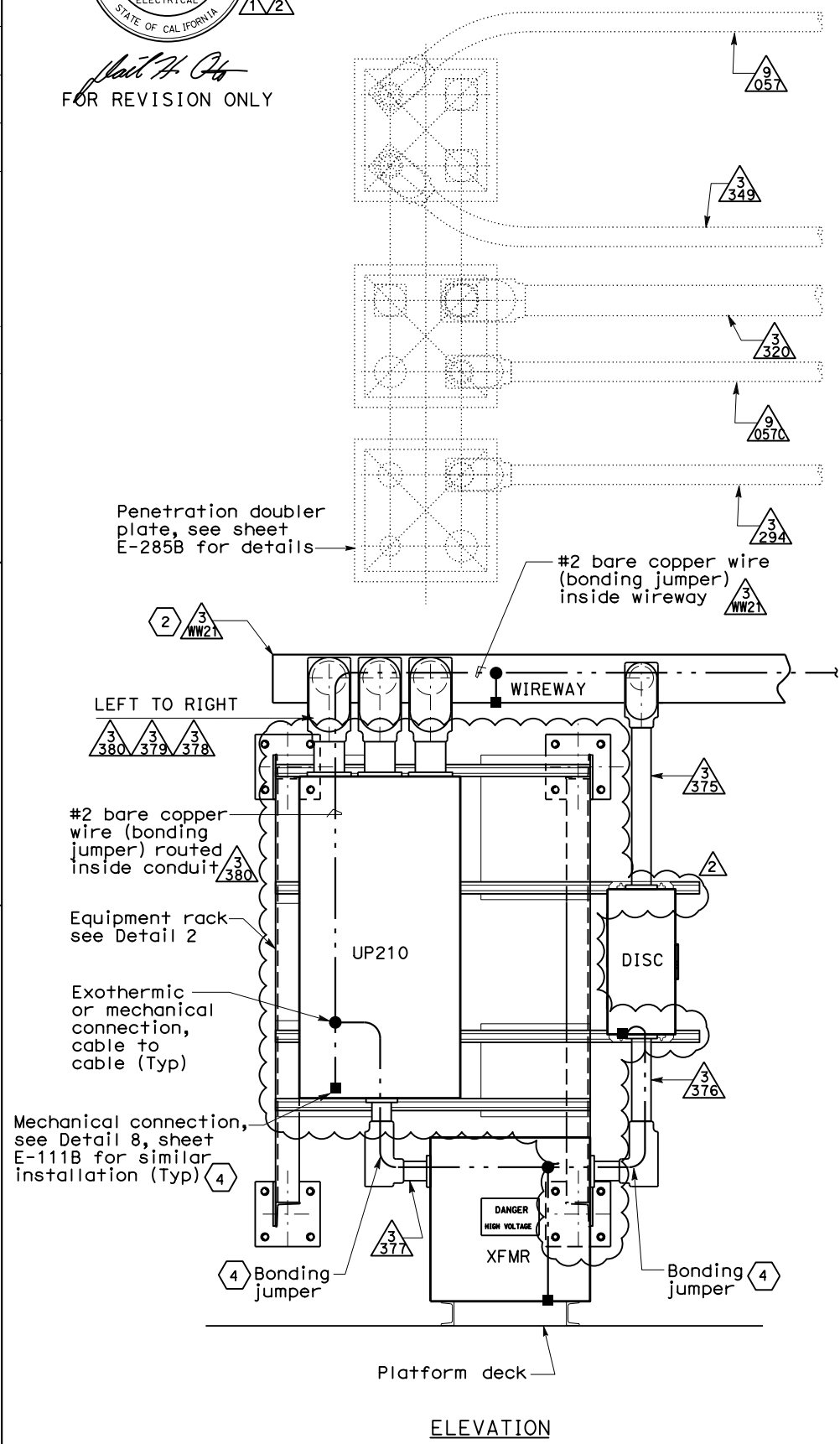


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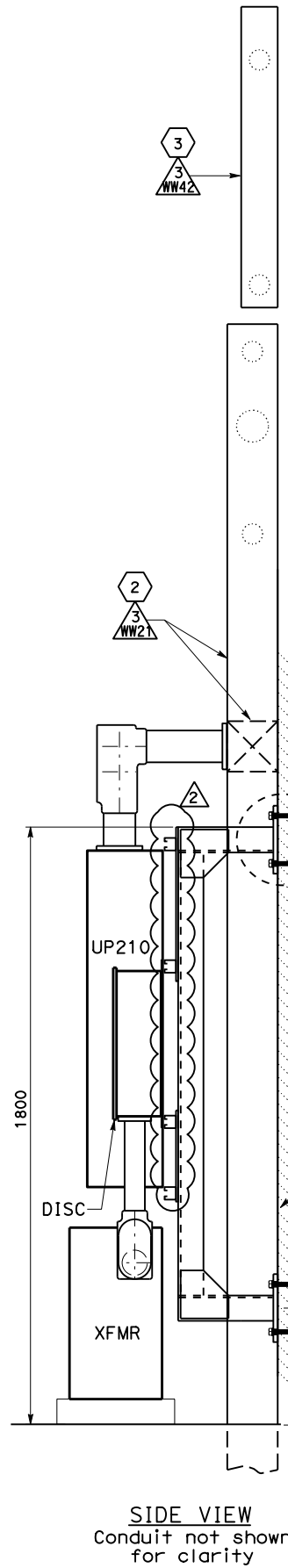
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DESIGN OVERSIGHT
BEHZAD GOLEHAMMADI

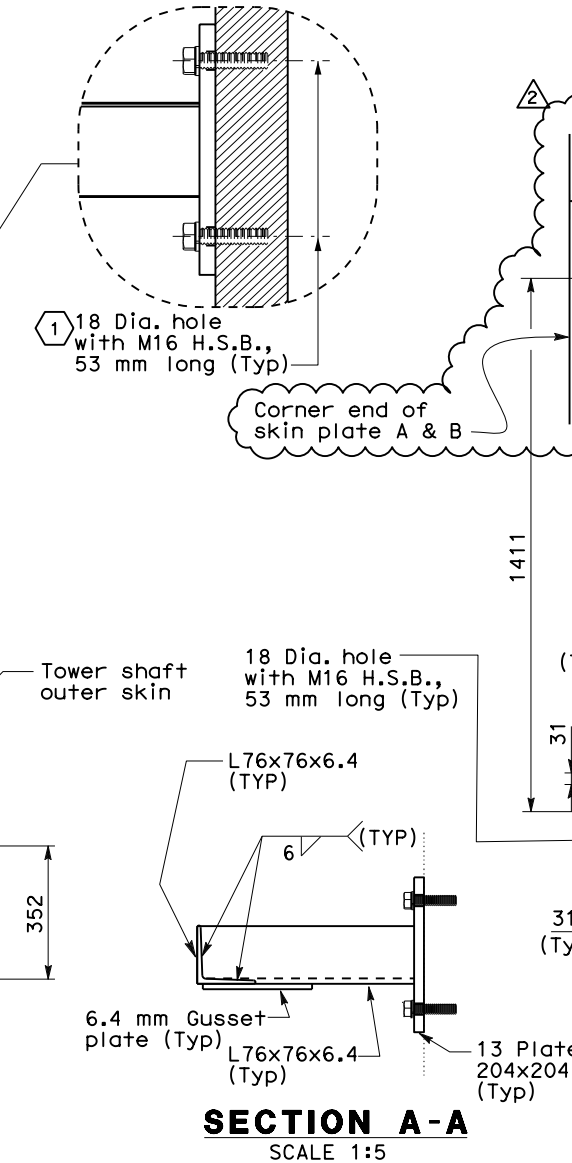
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans



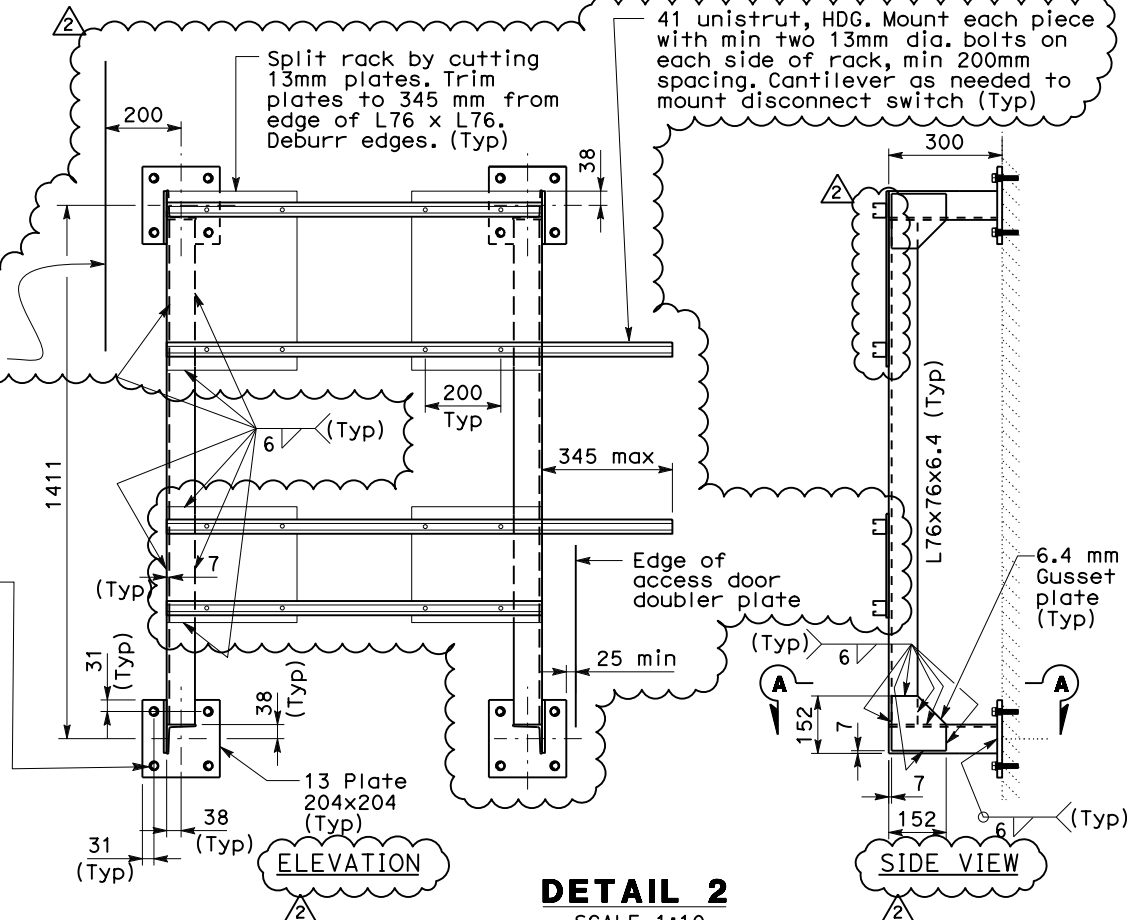
DETAIL 1
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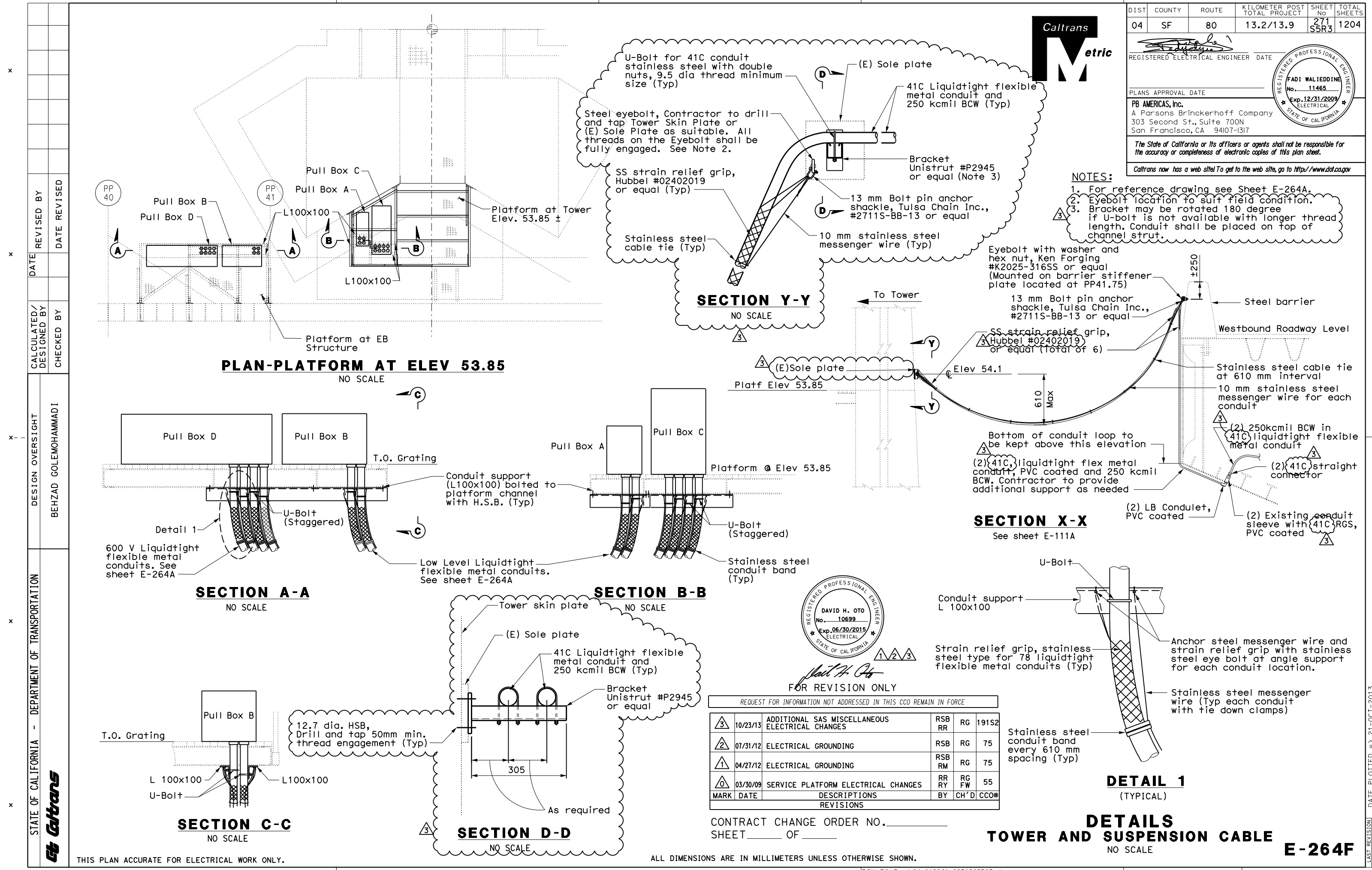


SIDE VIEW
Conduit not shown for clarity



SECTION A-A
SCALE 1:5





DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	SF	80	13.2/13.9	271	55R3	1204

REGISTERED ELECTRICAL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
FADI WALIEDDINE
No. 11465
Exp. 12/31/2009
ELECTRICAL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

PB AMERICAS, Inc.
A Parsons Brinckerhoff Company
303 Second St., Suite 700N
San Francisco, CA 94107-1317

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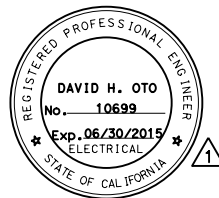
- NOTES:
1. For reference drawing see Sheet E-264A.
 2. Eyebolt location to suit field condition.
 3. Bracket may be rotated 180 degree if U-bolt is not available with longer thread length. Conduit shall be placed on top of channel strut.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
3	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RSB RR	RG	191S2
2	07/31/12	ELECTRICAL GROUNDING	RSB RR	RG	75
1	04/27/12	ELECTRICAL GROUNDING	RSB RM	RG	75
1	03/30/09	SERVICE PLATFORM ELECTRICAL CHANGES	RR RY	RG FW	55
REVISIONS					



CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

DETAILS TOWER AND SUSPENSION CABLE NO SCALE E-264F

- ① See sheet E-285B for penetration doubler plate and schedule and details.
- ② For conduits and grounding route through to penetrations at these elevation see E-111A, E-264, E-264B, E-281, E-293 and E-366.
- ③ Liquidtight flexible metal conduit May be used where rigid conduit is not feasible to install due to the available space to bend rigid conduit.



FOR REVISION ONLY

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE						
	10/23/13	ADDITIONAL ELECTRICAL CHANGES	SAS MISCELLANEOUS CHANGES	RG	DO	191
	01/25/12	ELECTRICAL CHANGES FOR ELEVATION 53 IMPROVEMENTS		TW	RG	19
MARK	DATE	DESCRIPTIONS		BY	CH'D	CCO
REVISIONS						

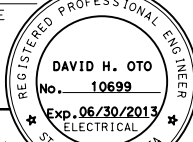
CONTRACT CHANGE ORDER NO. _____
SHEET OF



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEET
04	SF		13.2/13.9	271 S10R1	120

David H. Otto 12/21/11
 REGISTERED ELECTRICAL ENGINEER DATE

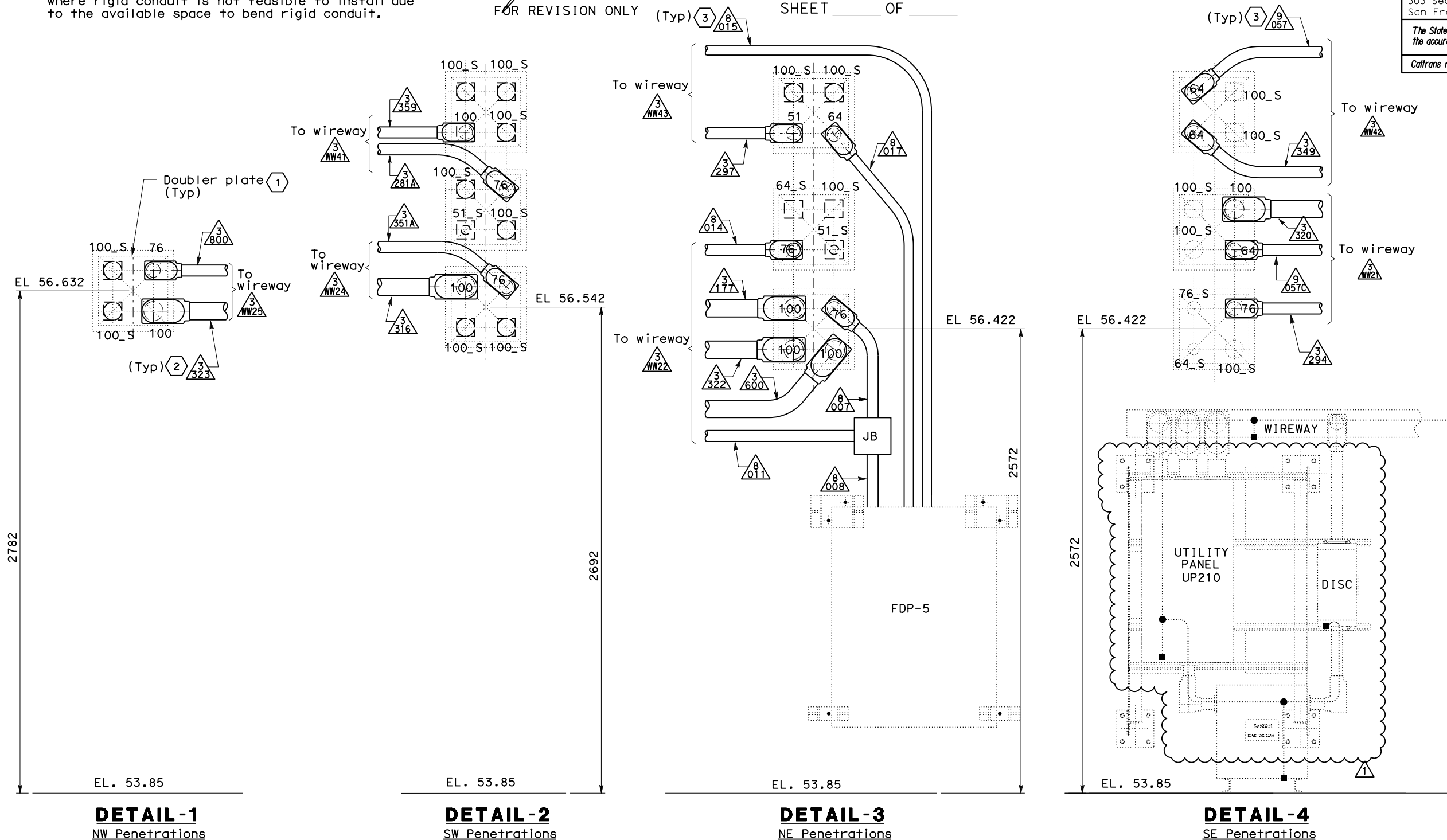
PLANS APPROVAL DATE _____



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 303 Second St., Suite 700N
 San Francisco, CA 94107-1317

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DETAILS

TOWER AND SUSPENSION CABLE TOWER POWER AND LIGHTING

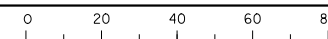
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E - 264L

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SCALE IS IN MILLIMETERS

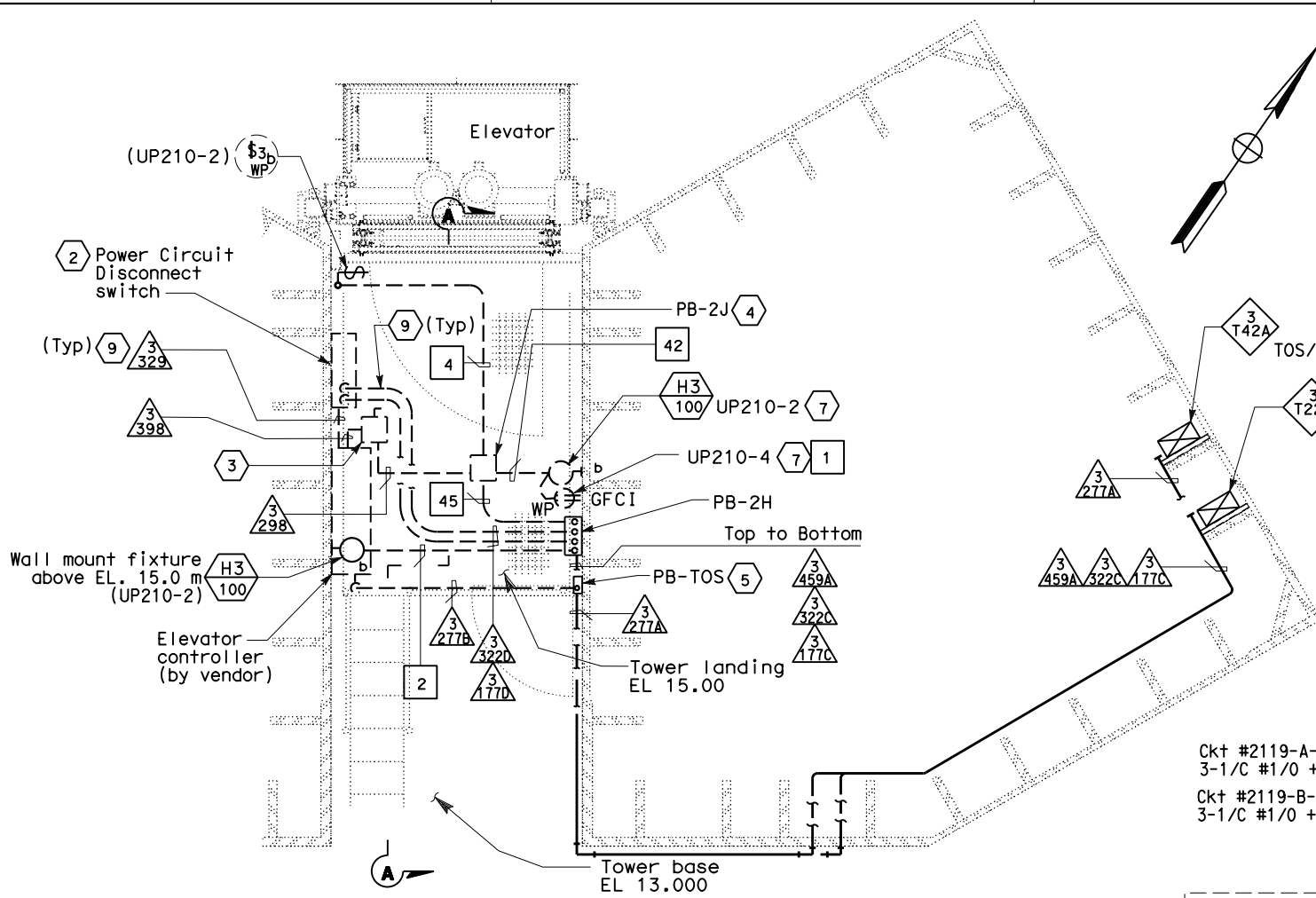


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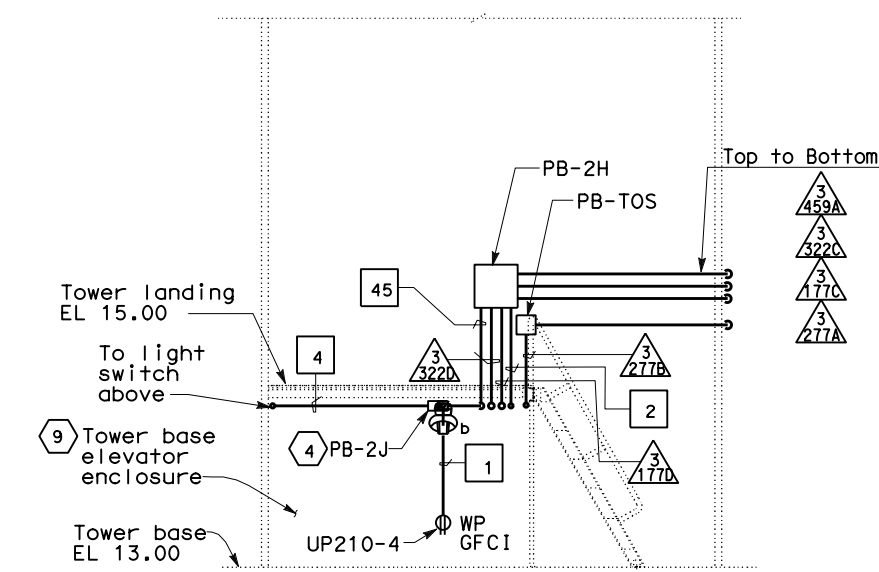
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EA 0120F1

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TIME PLOTTED => 09:09

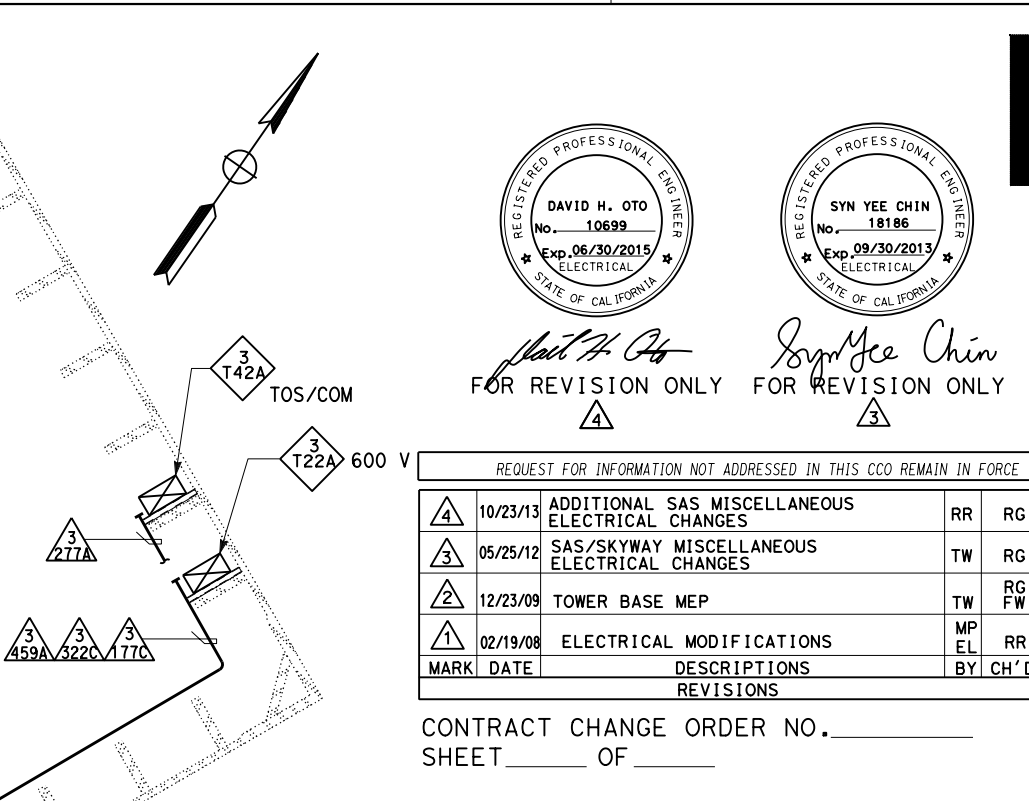


PLAN AT 13.00 M
TOWER BASE ELEVATOR ENCLOSURE
SCALE NTS



SECTION A-A
SCALE NTS

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.



MAIN TOWER ELEVATOR PIT
CONNECTION DIAGRAM

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

REGISTERED PROFESSIONAL ENGINEER
DAVID H. OTO
No. 10699
Exp. 06/30/2015
ELECTRICAL
STATE OF CALIFORNIA

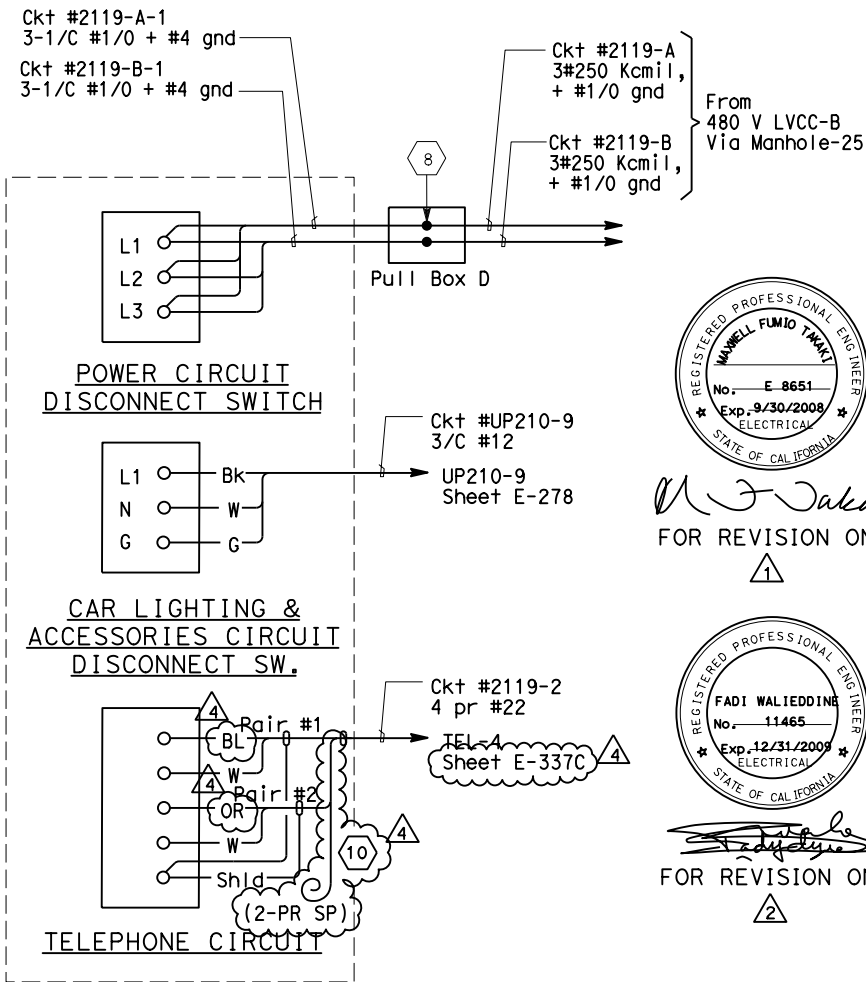
REGISTERED PROFESSIONAL ENGINEER
SYN YEE CHIN
No. 18186
Exp. 09/30/2013
ELECTRICAL
STATE OF CALIFORNIA

FOR REVISION ONLY
4

FOR REVISION ONLY
3

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
4	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	19152
3	05/25/12	SAS/SKYWAY MISCELLANEOUS ELECTRICAL CHANGES	TW	RG	191
2	12/23/09	TOWER BASE MEP	TW	RG FW	79
1	02/19/08	ELECTRICAL MODIFICATIONS	MP EL	RR	42

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____



REGISTERED PROFESSIONAL ENGINEER
MANUEL FUMIO TAKAI
No. E-8651
Exp. 9/30/2009
ELECTRICAL
STATE OF CALIFORNIA

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1

REGISTERED PROFESSIONAL ENGINEER
FADI WALIEDDINE
No. 11465
Exp. 12/31/2009
ELECTRICAL
STATE OF CALIFORNIA

FOR REVISION ONLY
2

- SHEET NOTES:
- Deleted.
 - 480 V, 3 Ø, 100 A, non-fused disconnect switch for elevator pit motor. Use liquid tight flexible conduit from disconnect switch to the motor.
 - 120 V single pole single throw disconnect switch for elevator lighting and fan. Mounted DS between power circuit disconnect switch and controller.
 - Mounte below Elevation 15.0 m grating.
 - PB-TOS for telephone communication lines.
 - Deleted.
 - For additional lighting and receptacles at EL. 9.00 M, see sheet E-266.
 - Splice conductors inside pull box "PB-D" see drawing E-264A
 - Conduit routing inside elevator enclosure may be adjusted to suit field condition.
 - Spare cable or conductor ends shall be coiled and taped.
- NOTES:
- References:
 - For utility panel UP-210 schedule, see sheet E-278.
 - For types of pull boxes, splice boxes and enclosures, see sheets E-83 and E-169.
 - For conduit and cable tray schedules, see sheets starting at E-401.
 - For lighting fixture schedule, see sheet E-273.
 - For typical lighting installation details, see sheet E-267.
 - For typical conduit installation details, see sheet E-268.
 - Electrical conduits shall enter the tower shafts between stiffeners A3 and A4 only. For conduit entry details, see Structural Utility drawings
 - Fixture mounting height elevation shall be 2.4 m above floor/platform elevation UNO.
 - All conduits and fittings routed exposed at grating shall be rigid galvanized steel, PVC coated.
 - For other related work not shown on this sheet, see Electrical Special Provisions.

DETAILS
TOWER AND SUSPENSION CABLE
TOWER POWER AND LIGHTING
SCALE AS NOTED



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		289 R4	1204

12/19/02
REGISTERED ELECTRICAL ENGINEER DATE

12-6-04
PLANS APPROVAL DATE

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San Francisco, CA 94107-1317

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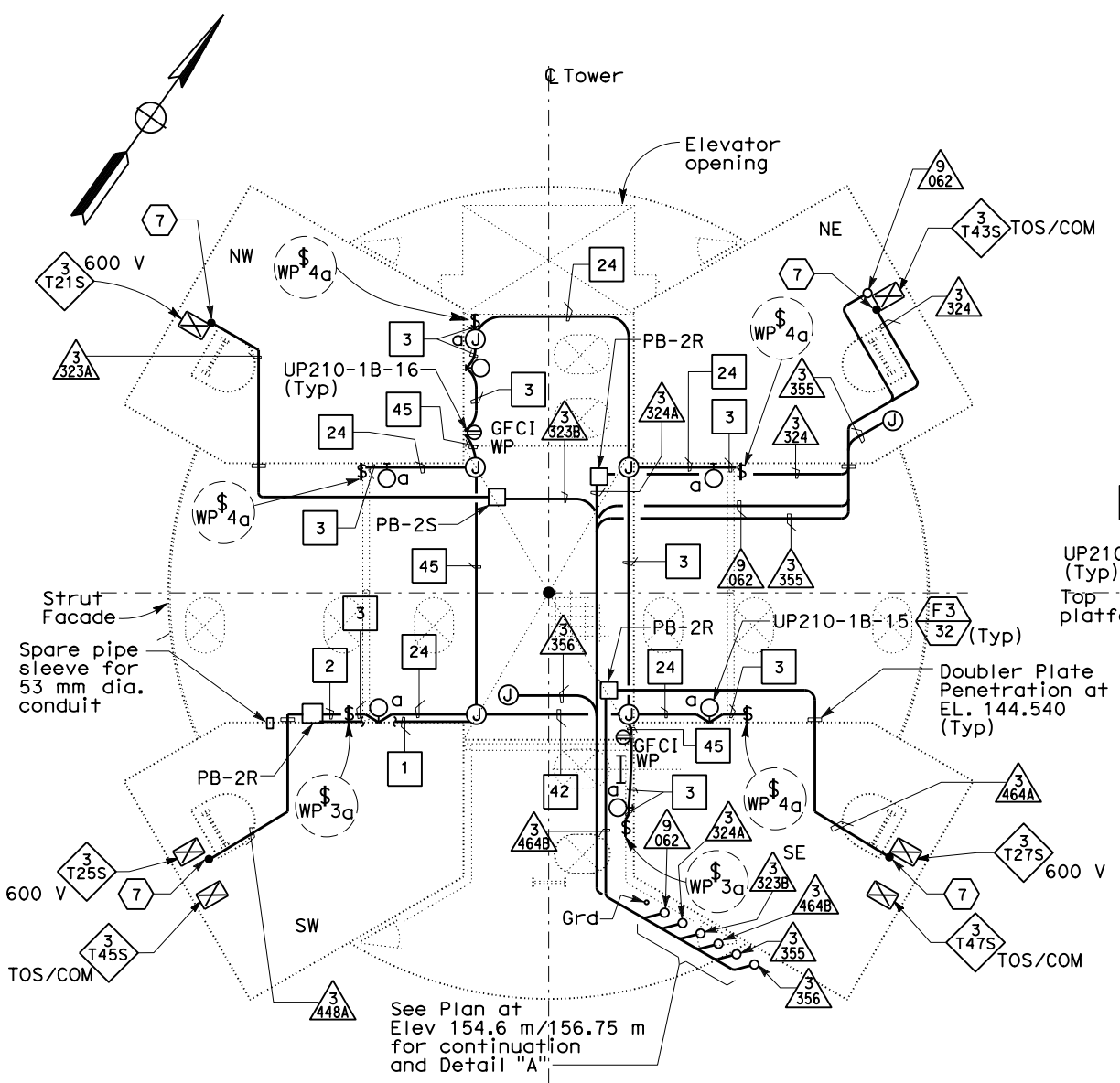
SHEET NOTES:

- 1 Deleted.
- 2 Fixture mounting height elevation shall be 158.5 m.
- 3 Deleted.
- 4 Fixture mounting height elevation shall be 159.25 m.
- 5 Deleted
- 6 Receptacle mounting height elevation shall be 158.450 m.
- 7 Conduit down to cable tray located below EL. 143.00 diaphragm.

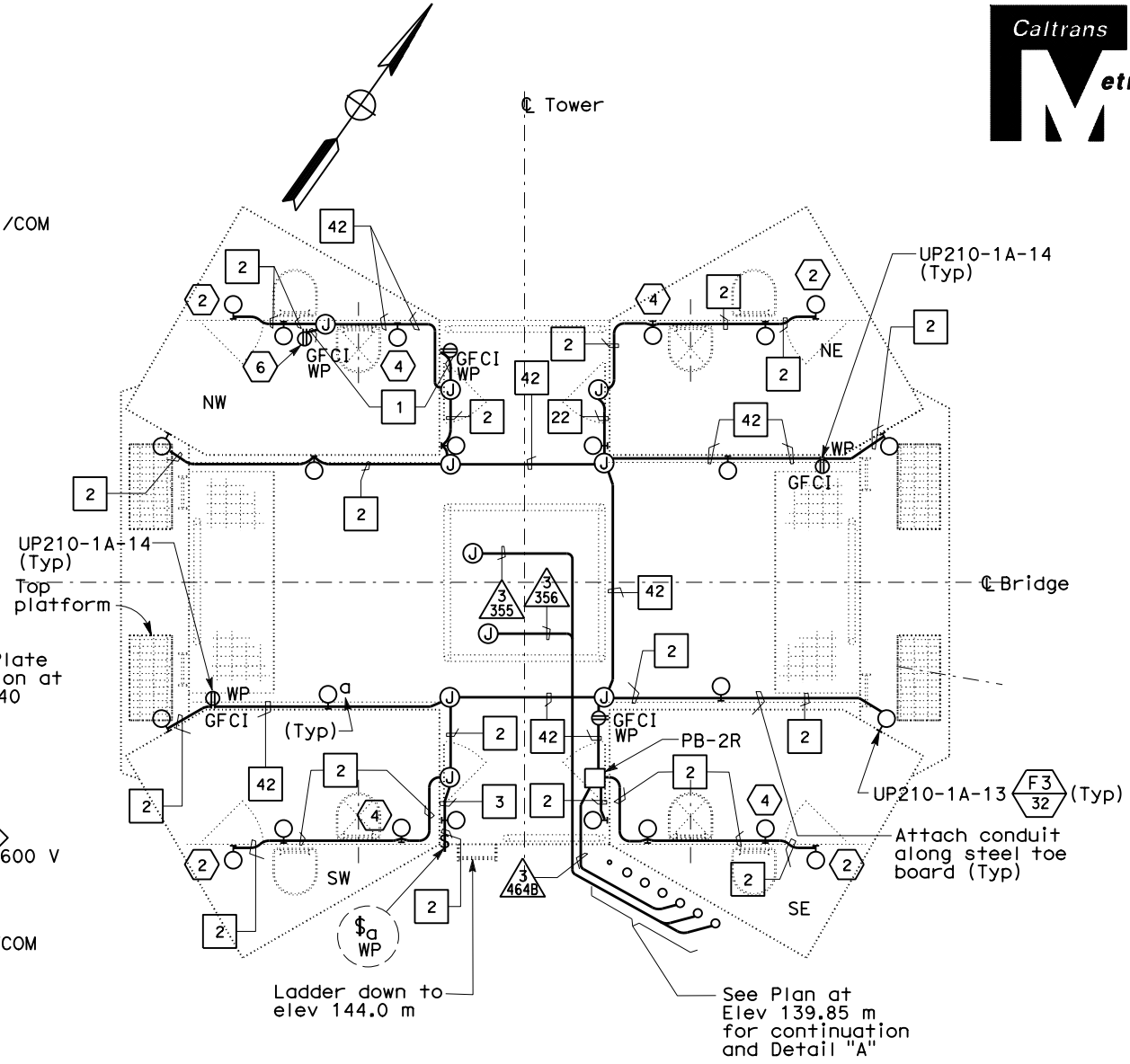
NOTES:

1. References:
- For utility panels UP210-1A and UP210-1B, panel schedules see sheets E-279 and E-280.
 - For types of pull boxes, splice boxes and enclosures, see sheets E-83 and E-169.
 - For conduit and cable tray schedules, see sheets starting at E-401.
 - For lighting installation details, see sheet E-267.
 - For lighting fixture schedule, see sheet E-263.
 - Deleted.
 - For typical conduit installation details, see sheets E-268, E-286A and E-286B.

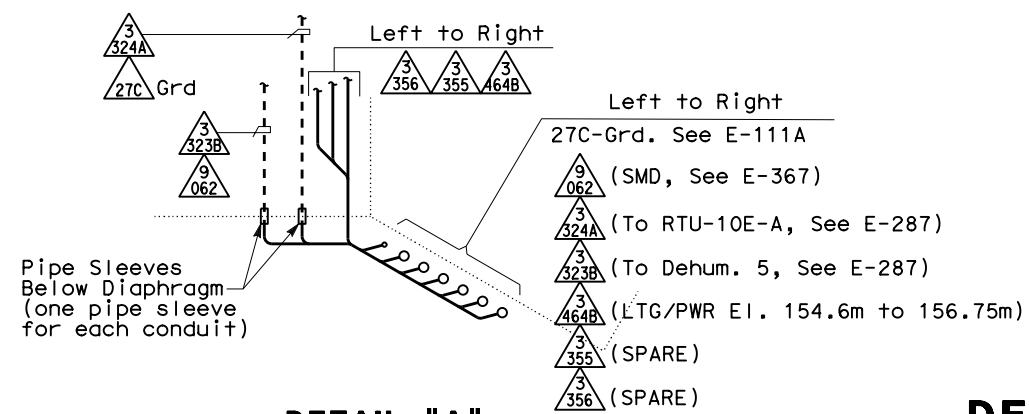
2. All conduits and fittings routed exposed at grating shall be rigid galvanized steel, PVC coated.
3. Fixture mounting height shall be 2.125 m above floor/platform elevation UNO.
4. Electrical conduits shall enter the tower shafts between stiffeners A3 and A4 only. For conduit entry details, see Structural Utility drawings.
5. For other related work not shown on this sheet, see Electrical Special Provisions.
6. The contractor shall install pull box/JB(s) along conduit runs to limit bends to be three (3) 90 degrees or fewer.



PLAN AT ELEVATION 139.85 m
SCALE: 1:40



PLAN AT ELEVATIONS 154.6 m TO 156.75 m
SCALE: 1:40



DETAIL "A"
ELEVATION 156.75

DETAILS
TOWER AND SUSPENSION CABLE
TOWER POWER AND LIGHTING
SCALE 1:50

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
4	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191S2
3	09/21/11	TOWER SUSPENDER CABLE & ELEVATOR	RM	TW	203S1
2	12/11/09	TOWER UTILITY PANELS	SYC	FW	70
1	02/19/08	ELECTRICAL MODIFICATIONS	MP	RR	42

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____



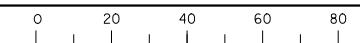
FOR REVISION ONLY FOR REVISION ONLY



FOR REVISION ONLY FOR REVISION ONLY

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FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS



DGN FILE =>04-0120F1_0289r04.dgn
USERNAME =>Llorico

CU 04251

EA 0120F1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	289 S1	1204

David H. OTO 10/07/13
 REGISTERED ELECTRICAL ENGINEER DATE

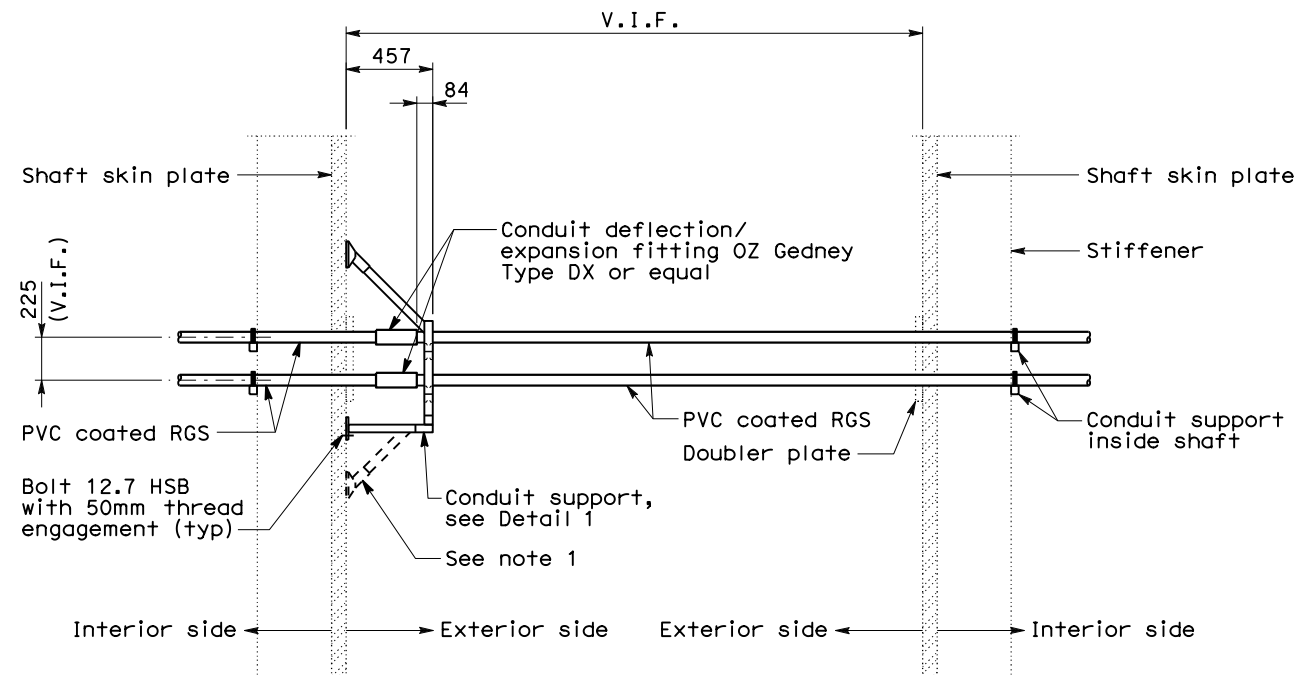
PLANS APPROVAL DATE

PB AMERICAS, Inc.
 A Parsons Brinckerhoff Company
 303 Second St., Suite 700N
 San Francisco, CA 94107-1317

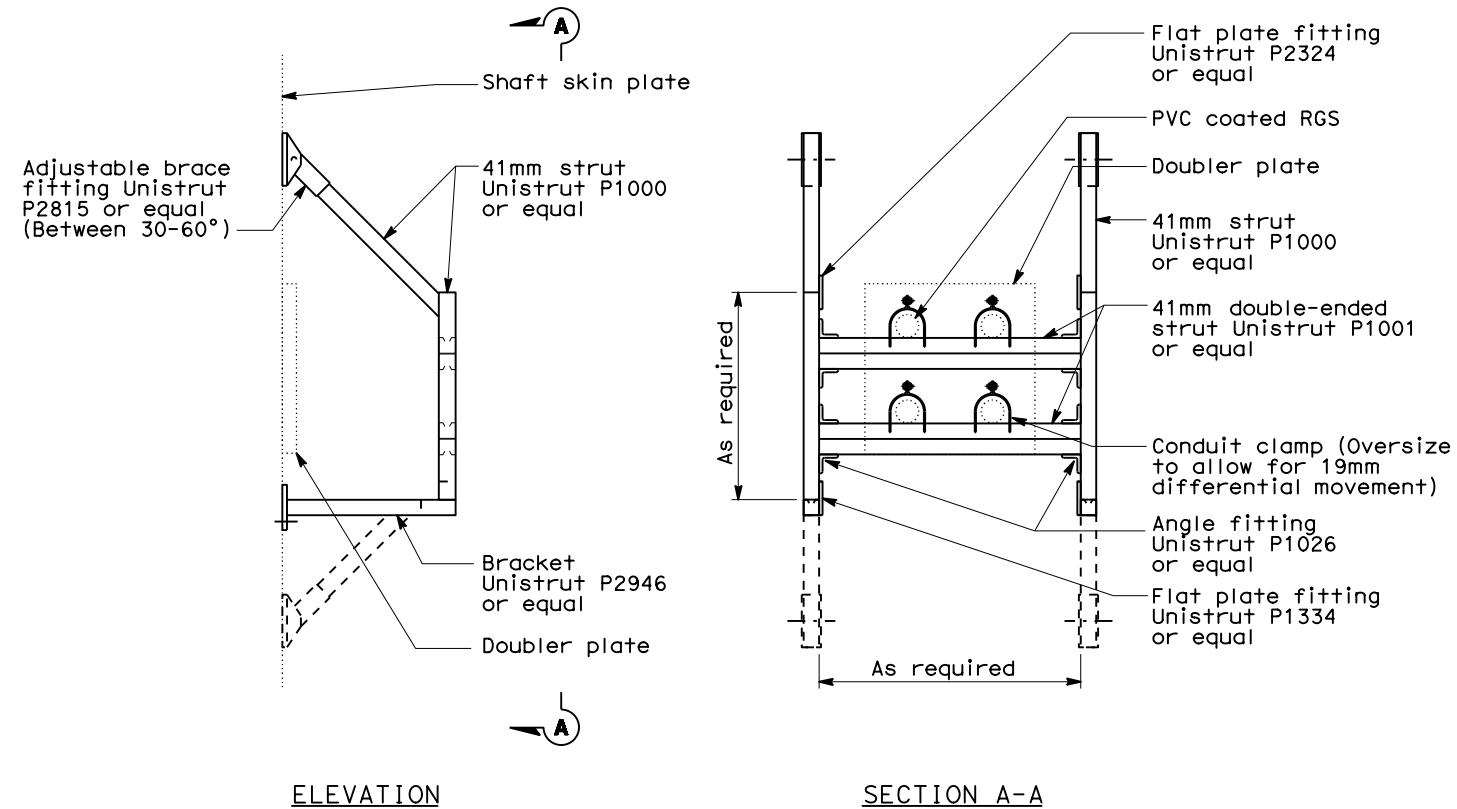
REGISTERED PROFESSIONAL ENGINEER
 DAVID H. OTO
 No. 10699
 Exp. 06/30/2015
 ELECTRICAL
 STATE OF CALIFORNIA


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CONDUIT INSTALLATION BETWEEN TOWER SHAFT



REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE						
	10/28/13	ADDITIONAL ELECTRICAL	SAS MISCELLANEOUS CHANGES	RR RB	RG	191S2
MARK	DATE	DESCRIPTIONS		BY	CH'D	CCO#
REVISIONS						

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

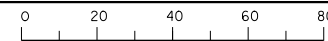
DETAILS
TOWER AND SUSPENSION CABLE
TOWER POWER AND LIGHTING
NO SCALE

E - 286 A

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

FOR REDUCED PLANS ORIGINAL
SCALE IS IN MILLIMETERS

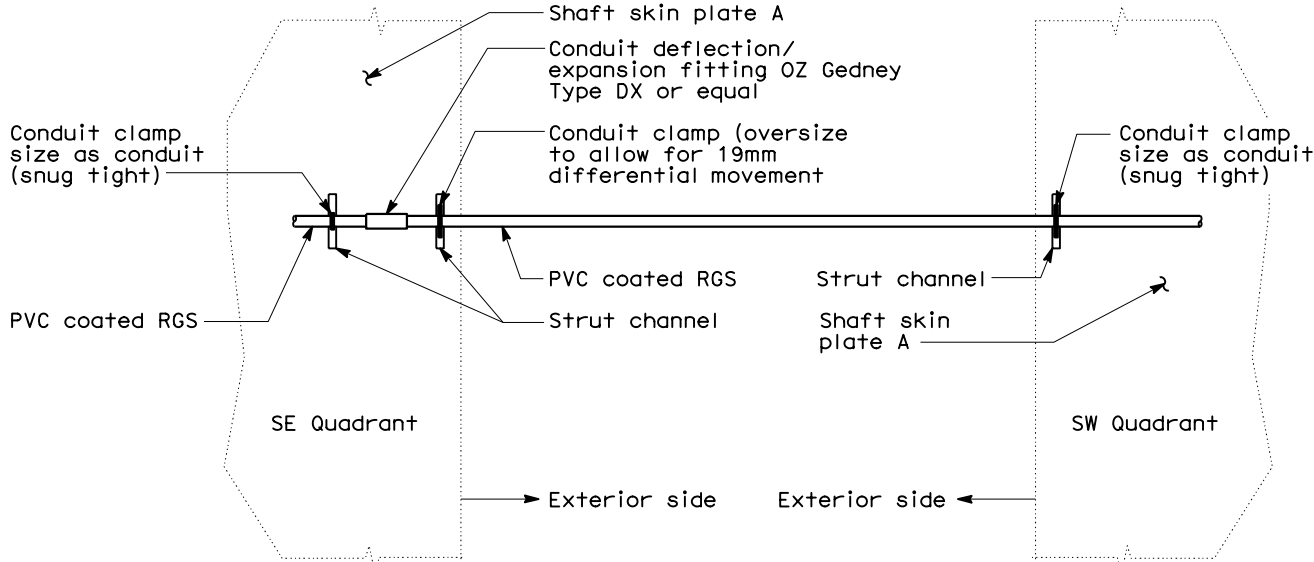


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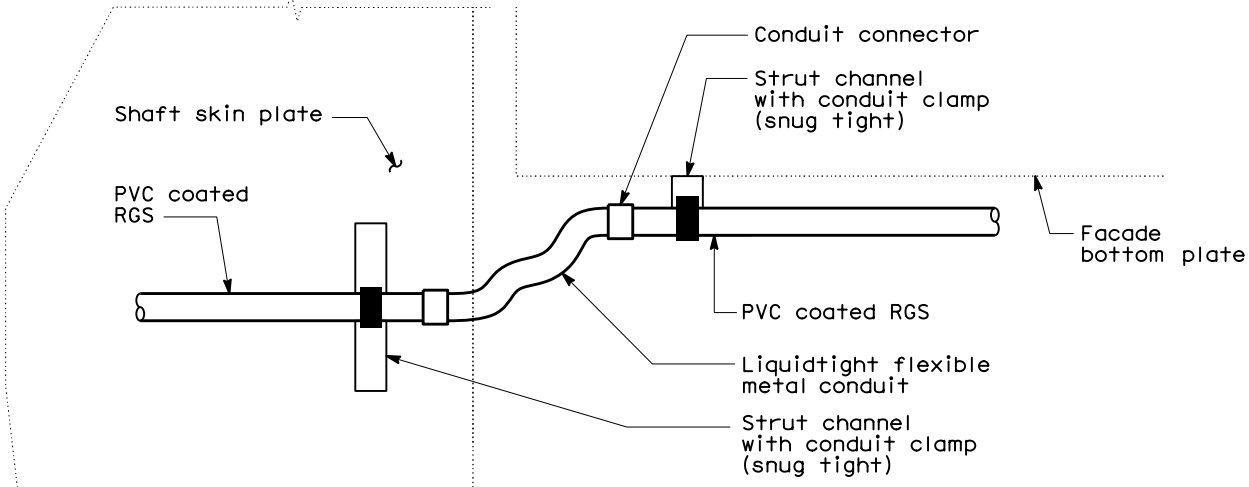
CU 04251

EA 0120F1

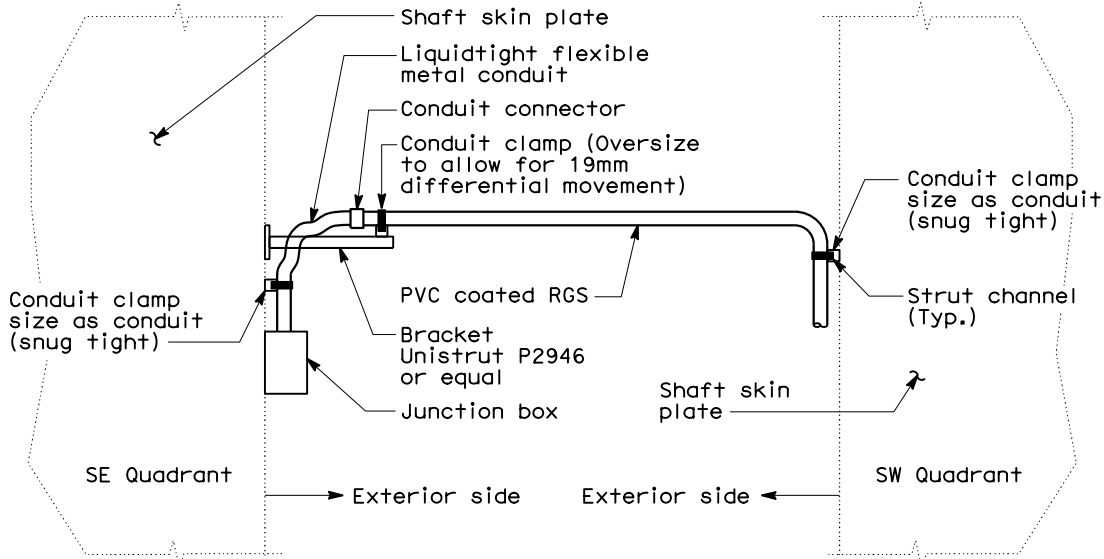
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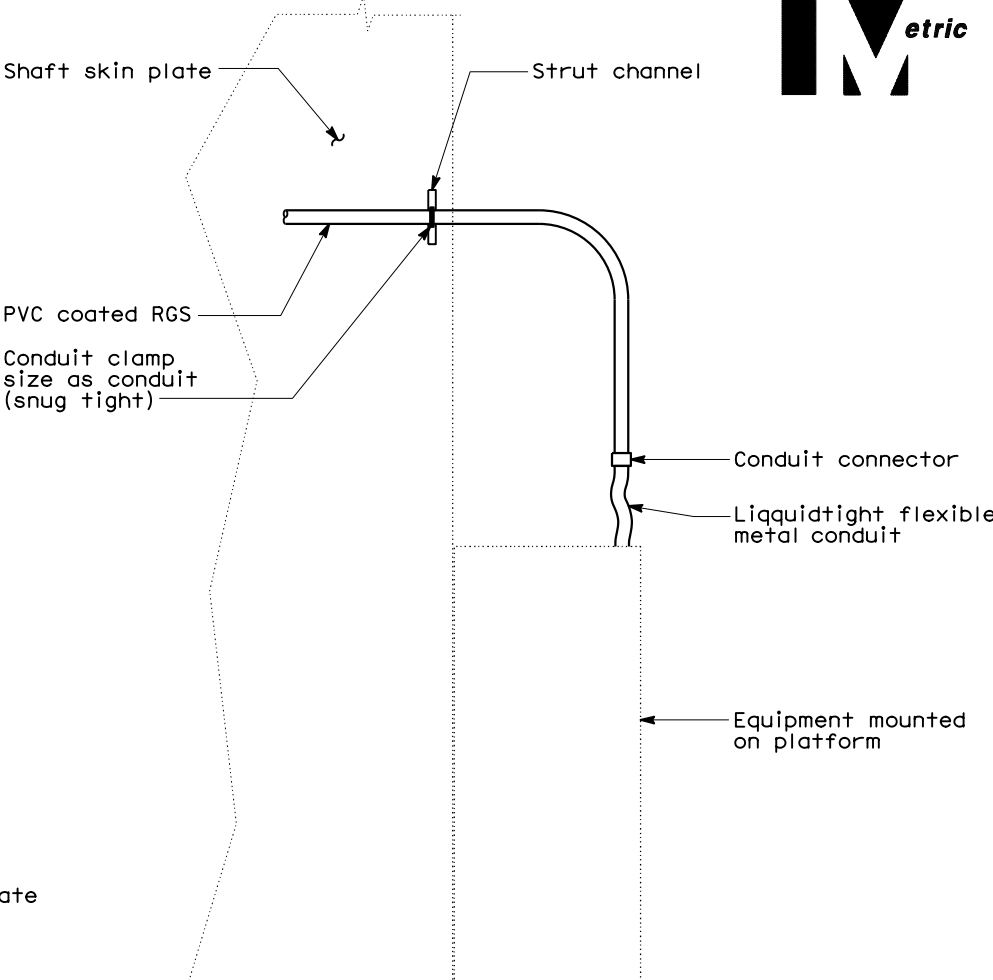
DETAIL 1



DETAIL 2



DETAIL 3



DETAIL 4



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		289 S2	1204

10/23/13

REGISTERED ELECTRICAL ENGINEER DATE

DAVID H. OTO

No. 10699

Exp. 06/30/2015

ELECTRICAL


STATE OF CALIFORNIA

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REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE							
	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES			RR RB	RG	191S2
MARK	DATE	DESCRIPTIONS			BY	CH'D	CCO#
REVISIONS							

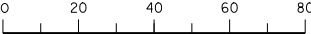
CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

DETAILS
TOWER AND SUSPENSION CABLE
TOWER POWER AND LIGHTING
NO SCALE

E-286B

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USERNAME =>Llorico

CU 04251

EA 0120F1

DATE PLOTTED => 21-OCT-2013
TIME PLOTTED => 16:53
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LAST REVISION



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		316 R1	1204

Jens Erlingsson

12/19/02

REGISTERED ELECTRICAL ENGINEER DATE

12-6-04

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER

JENS ERLINGSSON

No. 8249

Exp. 9/30/06

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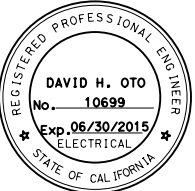
STATE OF CALIFORNIA

SHEET NOTES:

- 1 For cable/circuit number, see Table A.
- 2 Use Table A in conjunction with cable block diagram sheet E-317.
- 3 Deleted.

NOTES:

1. References:
- For circuit and conduit/cable tray schedules, see sheets starting at E-401.
- For Scada and telephone cable block diagram, see sheet E-317.
- For telephone interface plan and cable block diagram, see sheet E-316.



FOR REVISION ONLY

MARK	DATE	DESCRIPTIONS	BY	CK	CCO
1	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191S2
REVISIONS					

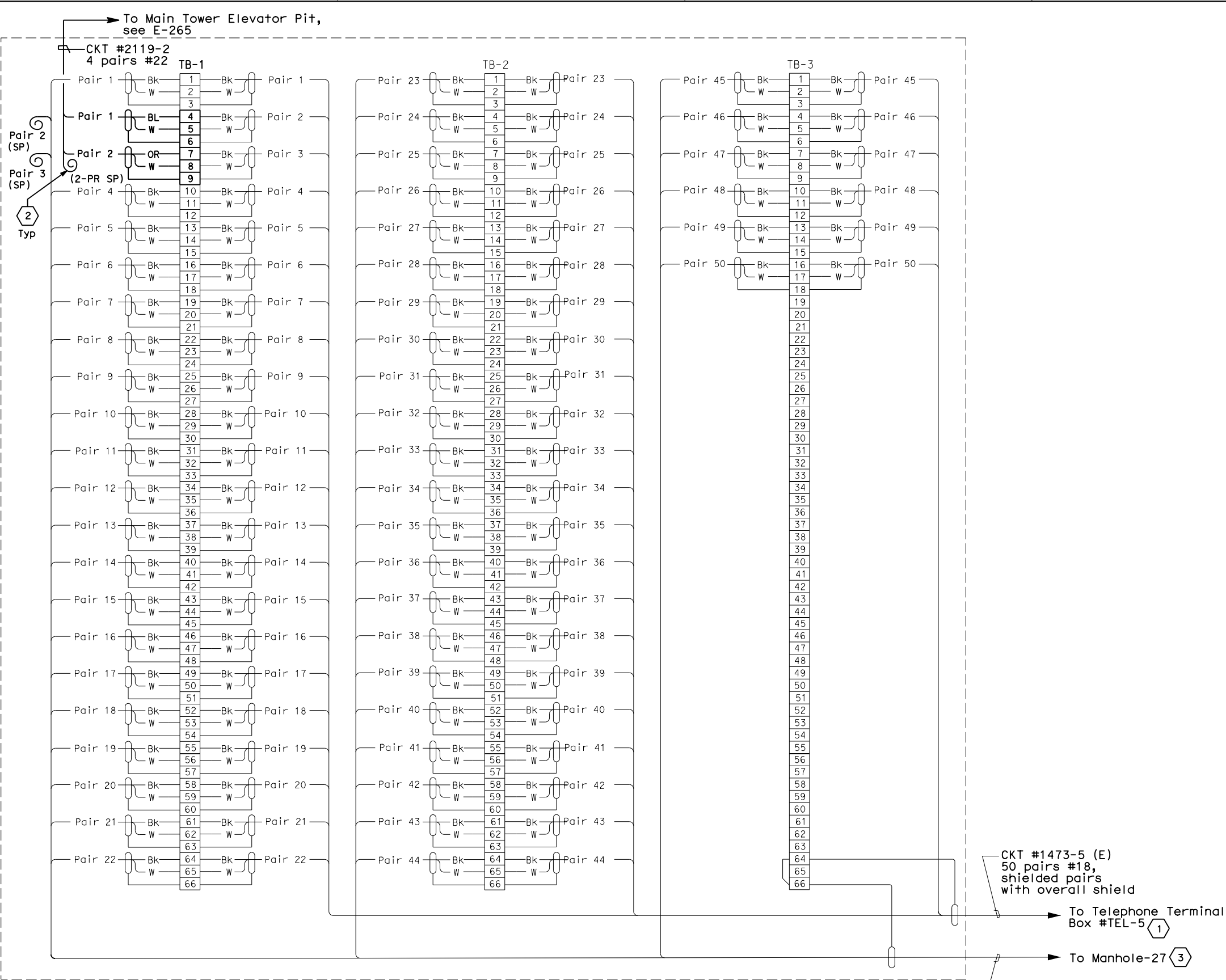
CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

TABLE A			
BOX NO.	CABLES		REMARKS
#TEL-4	—	—	For cable interface, see sheet E-337C.
#TEL-5	—	—	For cable interface, see sheet E-337D.
#TEL-6	1473-6	1473-7	
#TEL-7	1473-7	1473-8	
#TEL-8	1473-8	—	
	1473-10	2473-10	For cable interface, see sheet E-316, sheet notes 1 and 2

TELEPHONE TERMINAL BOX CONNECTION DIAGRAM

Shown for #TEL-6, See Table A for other terminal boxes

DETAILS
SCADA REMOTE TERMINAL UNIT SYSTEM
#TEL-6
TERMINAL CONNECTION DIAGRAM
NO SCALE



TELEPHONE TERMINAL BOX
CONNECTION DIAGRAM



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		316 S3	1204

10/23/13

REGISTERED ELECTRICAL ENGINEER DATE

DAVID H. OTO

No. 10699

Exp. 06/30/2015

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SHEET NOTES:

- ① For terminal connection diagram and continuation to TEL #5, see E-337D.
- ② Spare cable or conductors ends shall be coiled and taped.
- ③ The Contractor shall extend and coil 5 meters of cable in Manhole-27. All cables shall be tagged with circuit numbers as shown. For location of Manhole-27, see sheet E-11.

NOTES:

1. References:
- For circuit and conduit/cable tray schedules, see sheets starting at E-401.
- For Scada and telephone cable block diagram, see sheet E-317.
- For telephone interface plan and cable block diagram, see sheet E-316.

△	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191S2
MARK	DATE	DESCRIPTIONS	BY	CK	CCO
REVISIONS					

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

DETAILS
SCADA REMOTE TERMINAL UNIT SYSTEM
#TEL-4 TERMINAL CONNECTION DIAGRAM
NO SCALE

E-337C



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		316 S4	1204

10/23/13

REGISTERED ELECTRICAL ENGINEER DATE

DAVID H. OTO

No. 10699

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SHEET NOTES:

- 1 For terminal connection diagram and continuation to TEL #4, see E-337C. For TEL #6, see E-337.
- 2 Spare cable or conductor ends shall be coiled and taped.
- 3 Existing cable #2910-12 shall be abandoned in place, labeled spare and unterminated. Cable ends shall be coiled and taped.

NOTES:

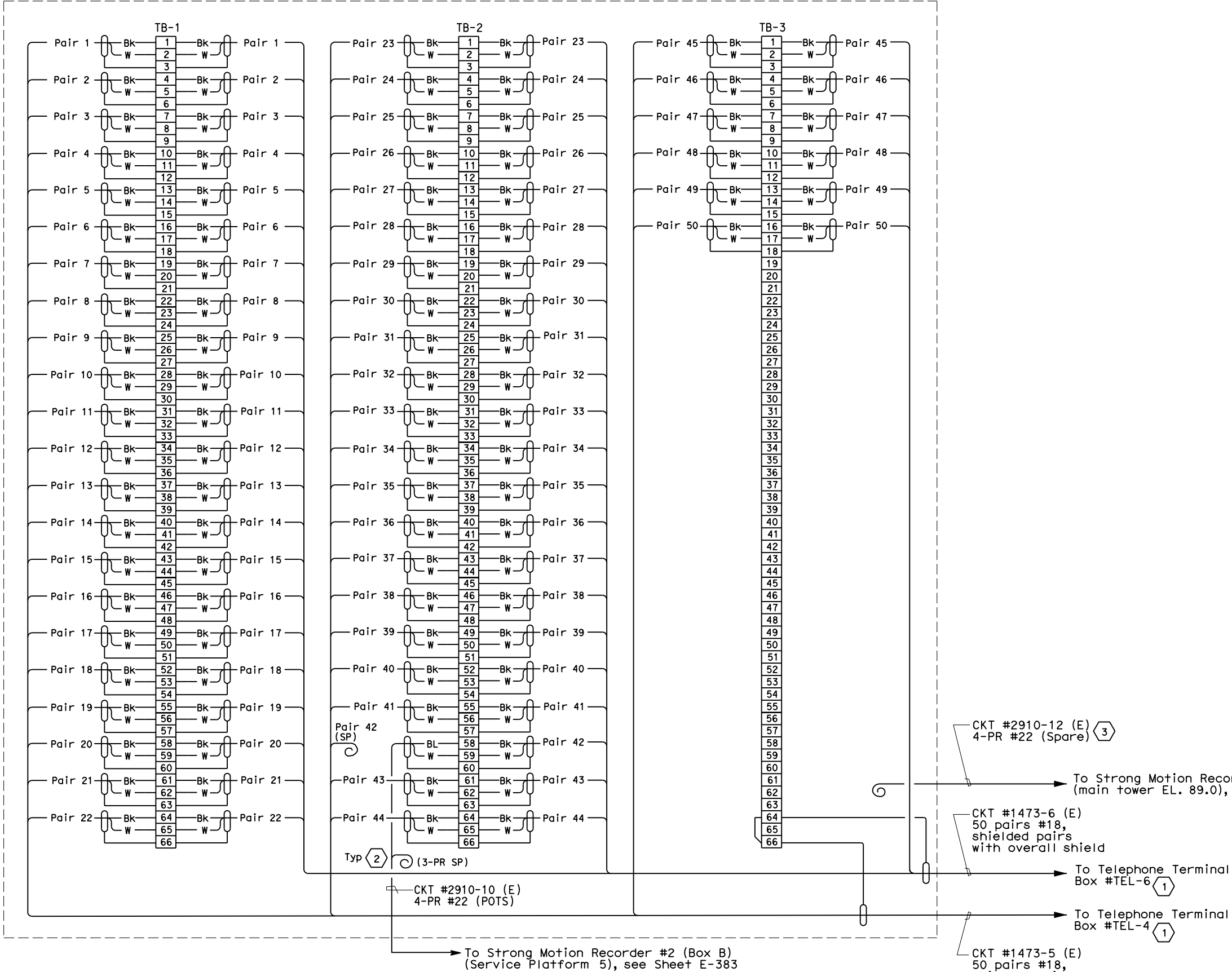
1. References:
- For circuit and conduit/cable tray schedules, see sheets starting at E-401.
 - For Scada and telephone cable block diagram, see sheet E-317.
 - For telephone interface plan and cable block diagram, see sheet E-316.

MARK	DATE	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191S2
		DESCRIPTIONS	BY	CK	CCO
		REVISIONS			

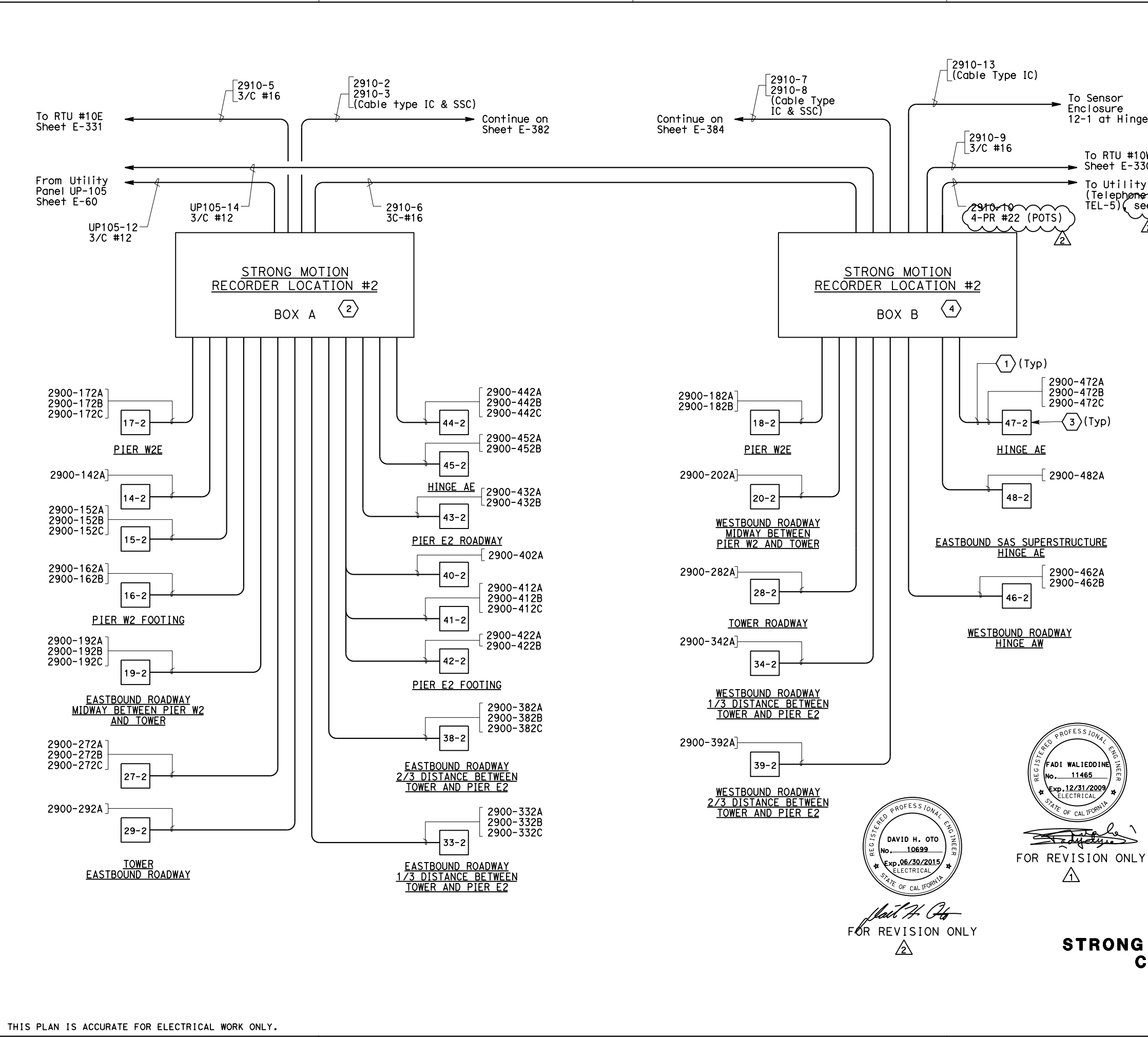
CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

DETAILS
SCADA REMOTE TERMINAL UNIT SYSTEM
#TEL-5 TERMINAL CONNECTION DIAGRAM
NO SCALE

E-337D



TELEPHONE TERMINAL BOX
CONNECTION DIAGRAM



Caltrans

Metric

DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	349	R2	1204

Jens Erlingsson

12/19/02

REGISTERED ELECTRICAL ENGINEER DATE

12-6-04

PLANS APPROVAL DATE

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1

Strong Motion sensor cable Type SSC, unless otherwise indicated.

2

Strong Motion Recorder #2 Box A consists of two 18-channel recorders and one 12-channel recorder, connected to a total of 35 sensors.

3

Sensor enclosure with identification number as shown.

4

Strong Motion Recorder #2 Box B consist of one 18-channel recoder connected to a total of 12 sensors.

NOTES:

1. For other related work not shown on this drawing, see Electrical Special Provisions.

2. References:

- For general notes of the strong motion detection system, see sheet E-361.
- For circuit and conduit/cable tray schedules, see sheets starting at E-401.

3. All conduits and fittings located outside or inside pier shall be galvanized rigid steel, PVC coated.

4. Secure enclosure to concrete with manufacturer's recommended mounting and approved by the Engineer.

5. Strong motion recorder #2 box A and box B located on service platform 5, see sheet E-72.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
2	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	RR	RG	191S2
1	10/03/08	STRONG MOTION SYSTEM	RG	FW	74
REVISIONS					

CONTRACT CHANGE ORDER NO. _____

SHEET _____ OF _____

DETAILS

STRONG MOTION DETECTION SYSTEM

CABLE BLOCK DIAGRAM

NO SCALE

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

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USERNAME =>Llorico

CU 04251

EA 0120F1

E-383



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
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3/27/13
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

71894
CIVIL

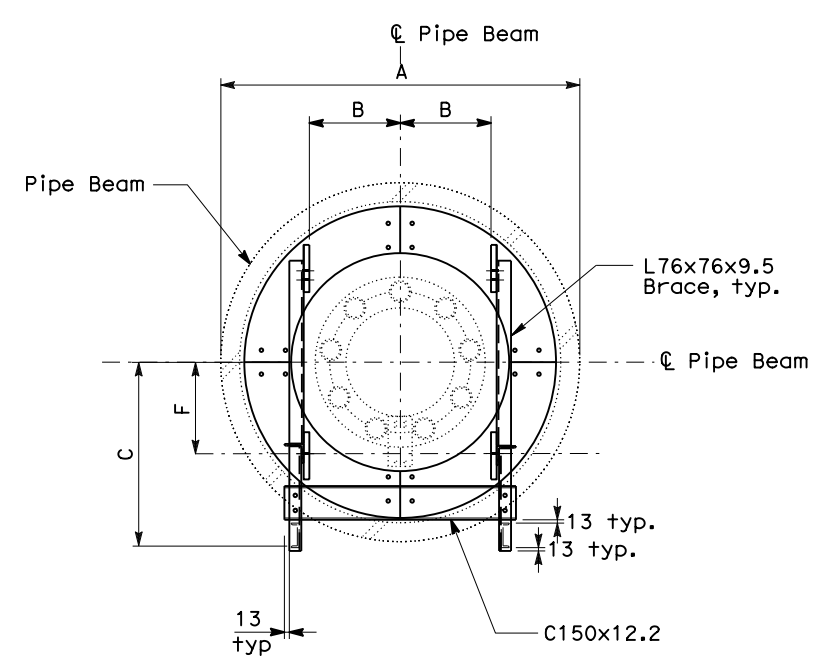
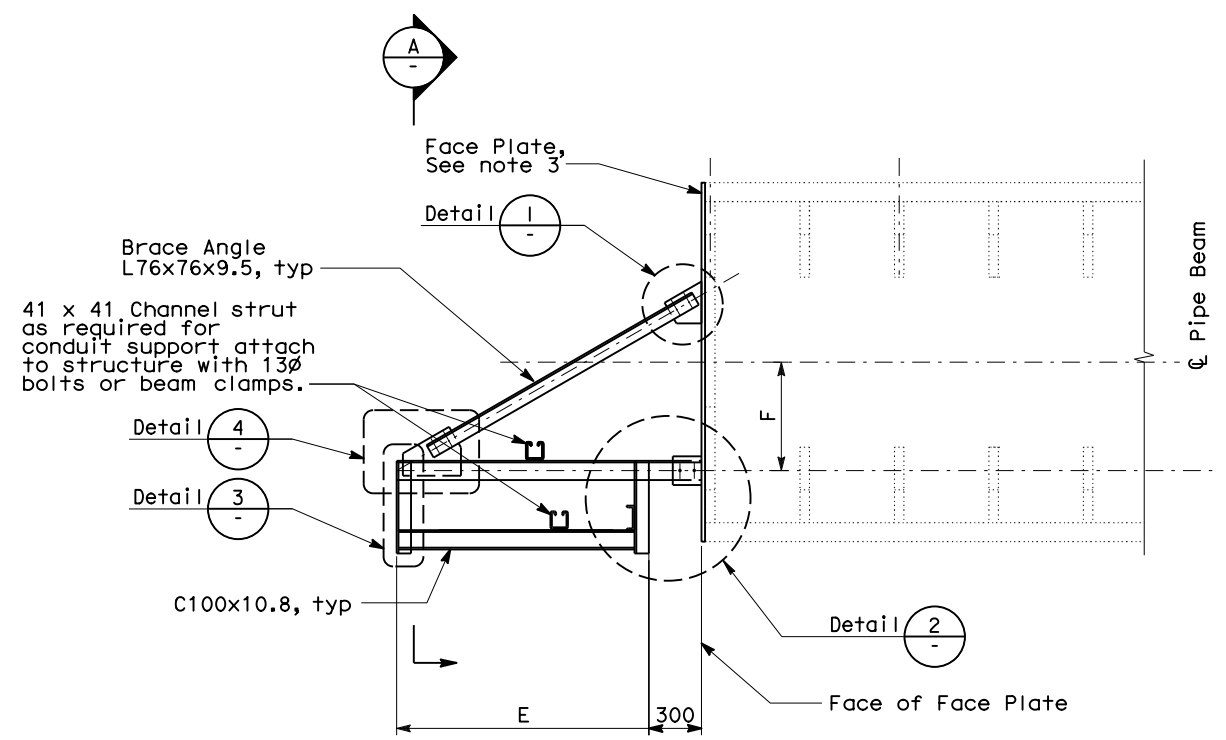
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TABLE
CONDUIT SUPPORT
DIMENSIONS

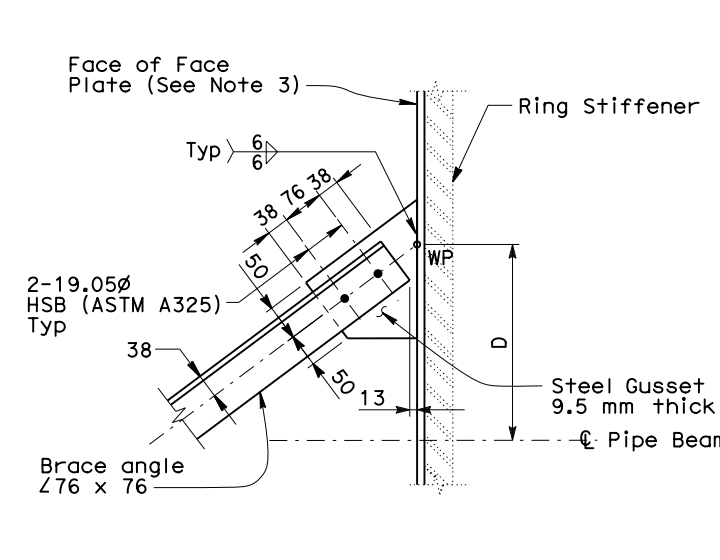
	Hinge A
A	1900
B	600
C	991
D	420
E	1335
F	574

- NOTES:
- For General Structural Notes, see AS-1.
 - For other details not shown, see electrical plans.
 - See sheet AS-35A for face plate.

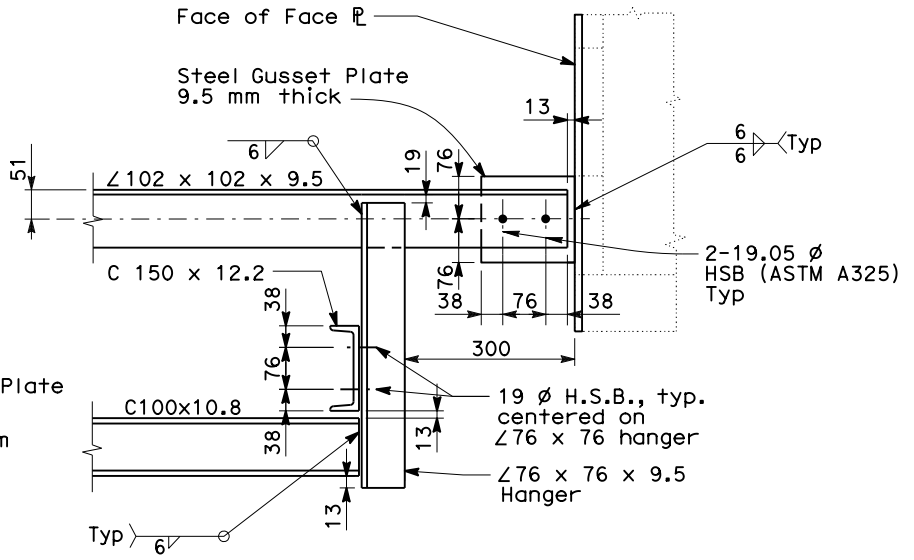


CONDUIT SUPPORT AT PIPE BEAM
SEE TABLE FOR DIMENSIONS
SCALE: NO SCALE

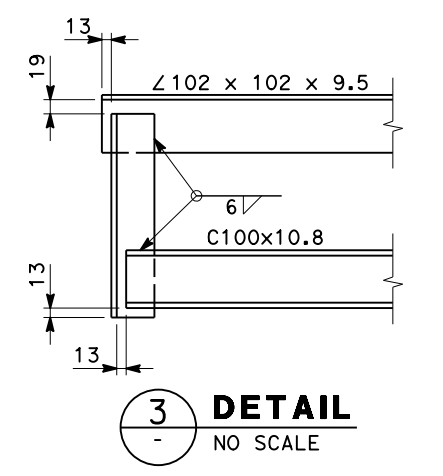
SECTION A-A
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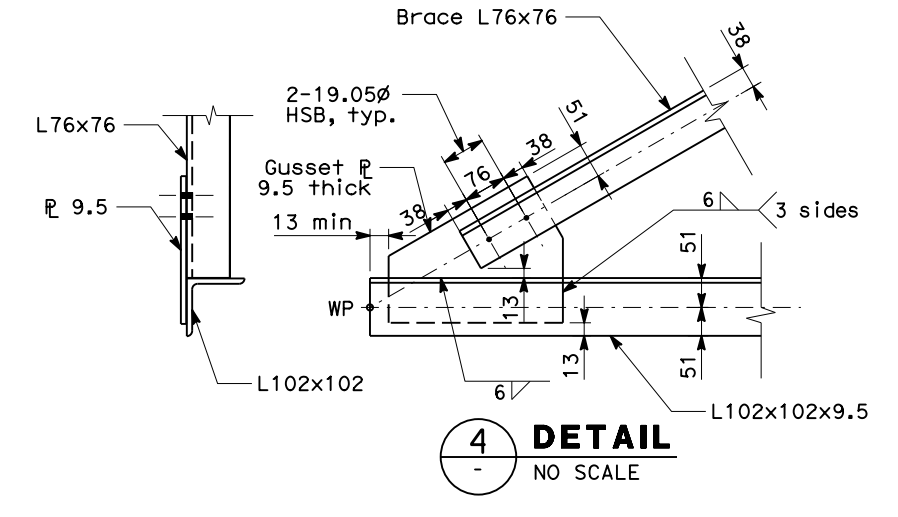
1 DETAIL
SEE TABLE FOR DIMENSIONS
NO SCALE



2 DETAIL
NO SCALE



3 DETAIL
NO SCALE
(Brace not shown for clarity)



4 DETAIL
NO SCALE
(Hanger L76x76 not shown for clarity)

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE				
10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	SAM	JZ	191S2
03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	SAM	RG	191S2
MARK	DATE	DESCRIPTIONS	BY	CH'D/CCO#
REVISIONS				

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

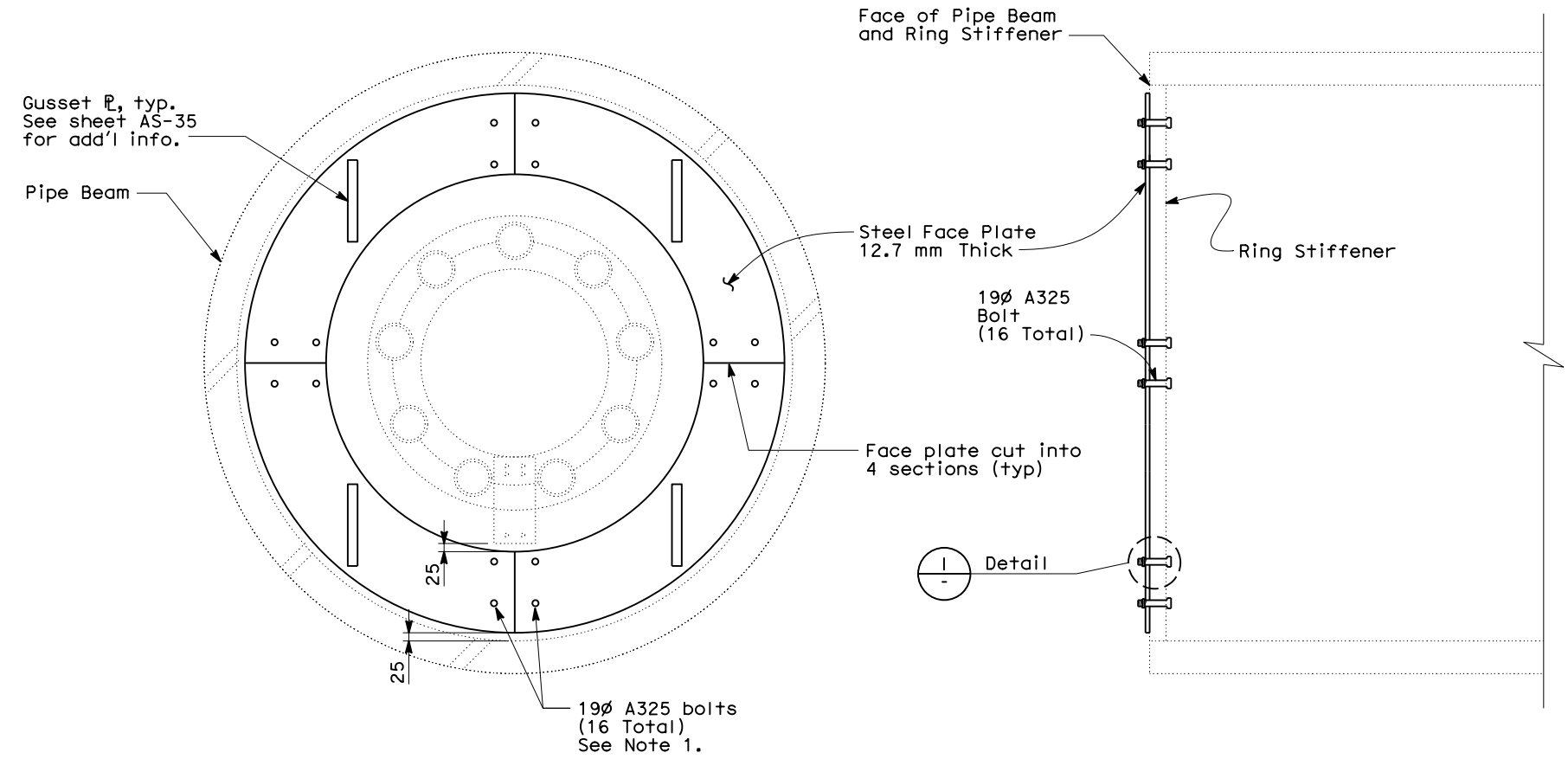
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MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN	BY	S. Mohammed	CHECKED	R. Garcia	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 34-0006	SAS/SKYWAY SUPERSTRUCTURE GIRDER CONDUIT/CABLE TRAY SUPPORT DETAIL - SHEET 1 OF 5	AS-35			
	DETAILS	BY	E. Llorico	CHECKED					R. Garcia		
	QUANTITIES	BY		CHECKED							
DESIGN DETAIL SHEET (METRIC) (REV. 3/1/98)						CU 04251 EA 0120F1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET	OF

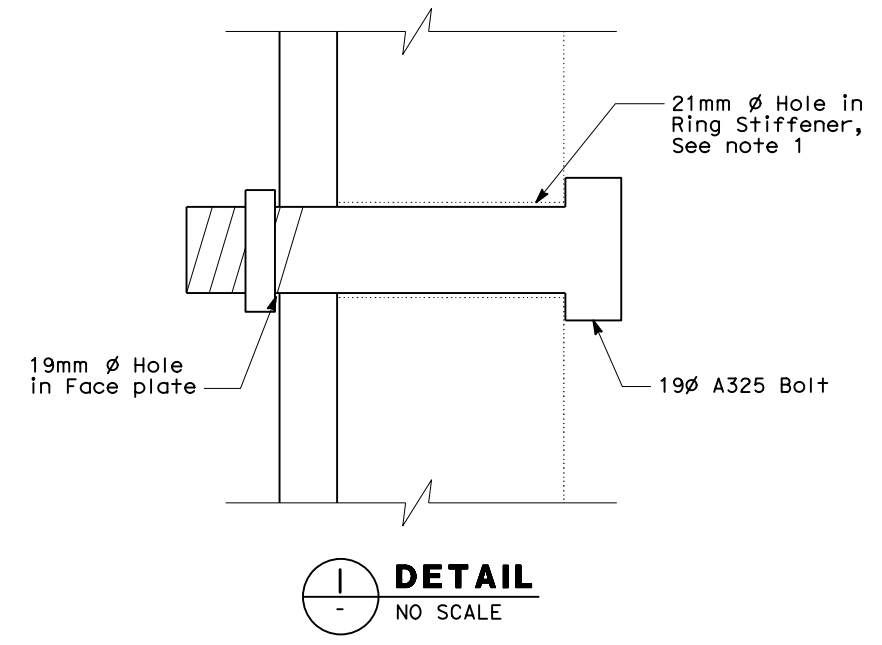
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	86 S38R1	1204
REGISTERED CIVIL ENGINEER			3/27/13		
PLANS APPROVAL DATE			No. 71894		
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FACE PLATE AT PIPE BEAM
NO SCALE



NOTES:

1. Bolt locations in face plate shall match existing bolt pattern in ring stiffener as shown. Verify existing bolt holes sizes in field.
2. Bolts shall be installed with lock washer.
3. All structural steel shall be hot-dipped galvanized.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
1	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	SAM	JZ	191S2
2	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	SAM	RG	191S2
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
REVISIONS					

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

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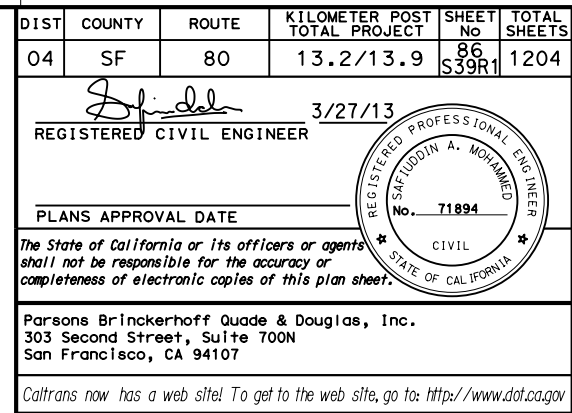
DESIGN	BY	S. Mohammed	CHECKED	R. Garcia	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 34-0006	SAS / SKYWAY SUPERSTRUCTURE GIRDER CONDUIT/CABLE TRAY SUPPORT DETAIL - SHEET 2 OF 5	AS-35A			
	DETAILS	BY	E. Llorico	CHECKED					R. Garcia		
	QUANTITIES	BY		CHECKED							
DESIGN DETAIL SHEET (METRIC) (REV. 3/1/98)						CU 04251 EA 0120F1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET	OF

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS: 0 10 20 30 40 50 60 70 80 90 100



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DATE PLOTTED => 21-OCT-2013
TIME PLOTTED => 16:54
USERNAME => Llorico



-
- Deck Ribs
- Deck E
- V.I.F.
- Future tendon anchorage zone, see structural drawings
- "W" or "E" Line
- Deck "T" stiffener
- WT345x62.5
x310 long, Typ
- 38 Typ
- 178 Typ
- 38 Typ
- 38 Typ
- 300 Min. Typ Clr
- 234 Typ
- 38 Typ
- 76 Min. Typ Clr
- (4)-19 Ø H.S.B. Typ
- MC310x67
- Wall "T" stiffener
- Maintain 152 Min. Clr between wall ribs and edge of WT, Typ
- 254
- 310
- Maintain 305 Min. Clr between anchorage zone and edge of WT, Typ
- SECTION A-A**
- NO SCALE
- Legend:
- 1
 - 0
 - MARK
- CON

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE						
	10/23/13	ADDITIONAL ELECTRICAL	SAS MISCELLANEOUS CHANGES	SAM	JZ	191S2
	03/27/13	ADDITIONAL ELECTRICAL	SAS MISCELLANEOUS CHANGES	SAM	RG	191S2
MARK	DATE	DESCRIPTIONS		BY	CH'D	CCO#
REVISIONS						

CONTRACT CHANGE ORDER NO. _____
SHEET OF _____

DESIGN	BY S. Mohammed	CHECKED R. Garcia
DETAILS	BY J. Fusco	CHECKED R. Garcia
QUANTITIES	BY	CHECKED

**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

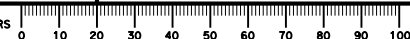
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PROJECT ENGINEER

BRIDGE NO.	34-0006
KILOMETER POS	13.2/13.9

SAS/ SKYWAY SUPERSTRUCTURE	
GIRDER CONDUIT/ CABLE TRAY SUPPORT	AS-35B
DETAIL - SHEET 3 OF 5	

DESIGN DETAIL SHEET (METRIC) (REV. 3/1/98)

ORIGINAL SCALE IN MILLIMETERS
FOR REDUCED PLANS



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EA	0120F

DISREGARD PRINTS BEARING
EARLIER REVISION DATES -

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET	OF
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	86 S40R1	1204

REGISTERED CIVIL ENGINEER 3/27/13

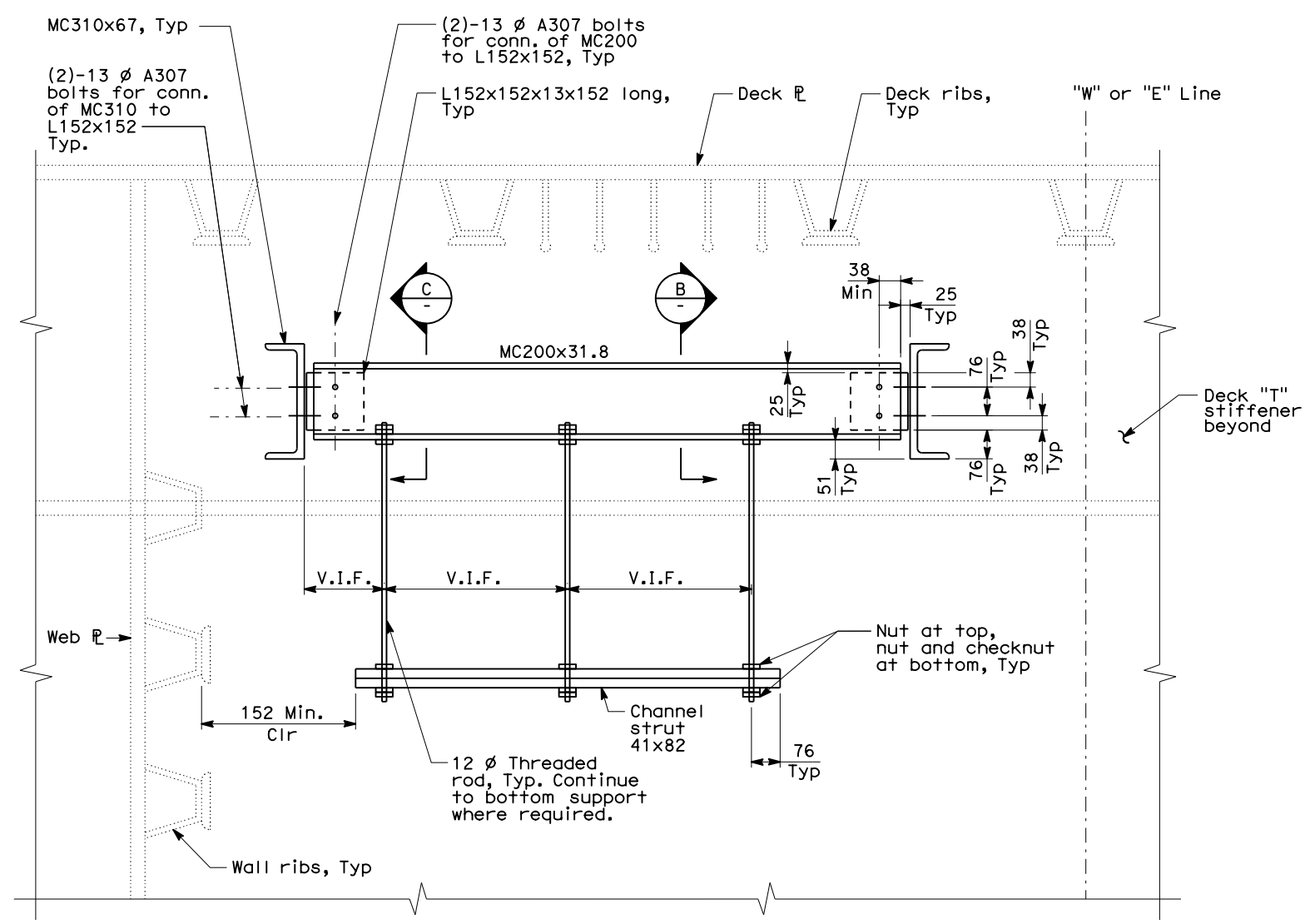
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SAFI UDDIN A. MOHAMMED No. 71894 CIVIL STATE OF CALIFORNIA

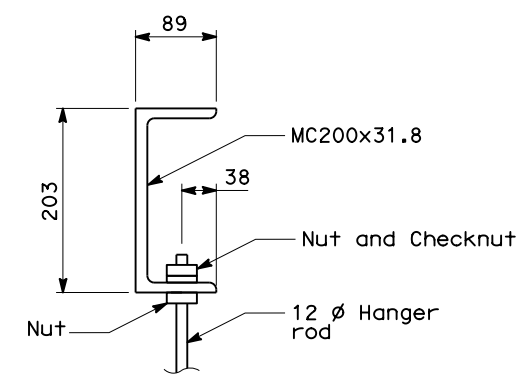
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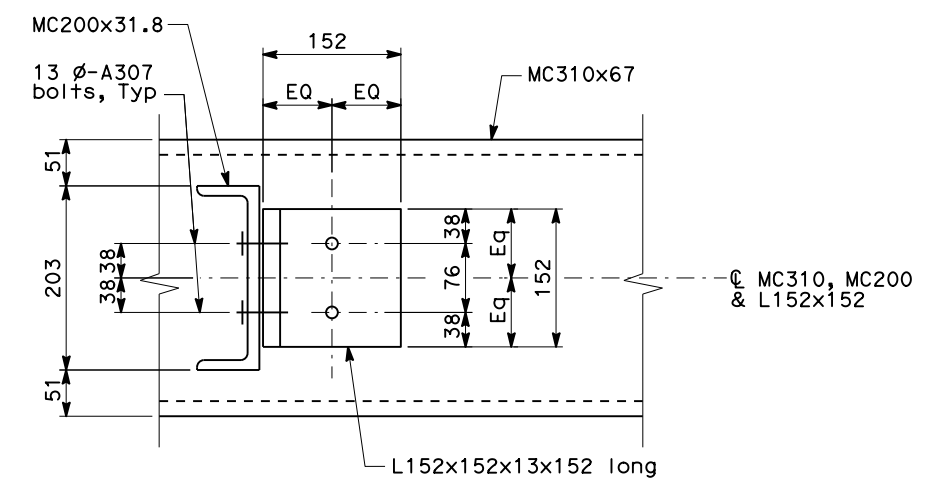
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SECTION A-A
NO SCALE



SECTION B-B
NO SCALE



SECTION C-C
NO SCALE

- NOTES:
1. See Electrical Plans for additional information
 2. Cable trays/conduits not shown for clarity.
 3. Seismic horizontal bracing not shown for clarity. See Electrical Plans.
 4. Verify all dimensions in field.

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
1	10/23/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	SAM	JZ	191S2
2	03/27/13	ADDITIONAL SAS MISCELLANEOUS ELECTRICAL CHANGES	SAM	RG	191S2
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
REVISIONS					

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

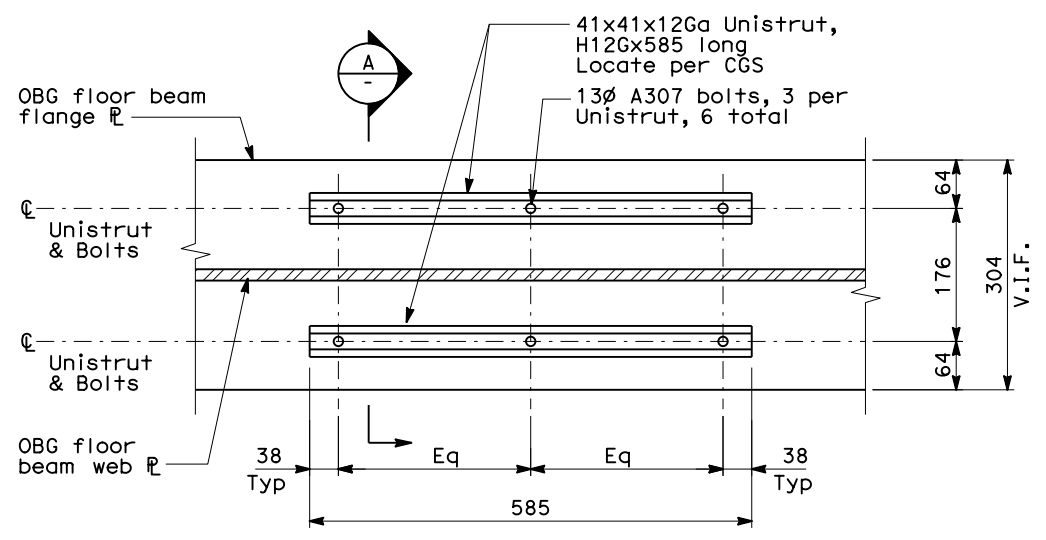
DESIGN	BY	S. Mohammed	CHECKED	R. Garcia	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 34-0006	SAS/SKYWAY SUPERSTRUCTURE GIRDER CONDUIT/CABLE TRAY SUPPORT DETAIL - SHEET 4 OF 5	AS-35C			
	DETAILS	BY	J. Fusco	CHECKED					R. Garcia		
	QUANTITIES	BY		CHECKED							
DESIGN DETAIL SHEET (METRIC) (REV. 3/1/98)						CU 04251 EA 0120F1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET	OF

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

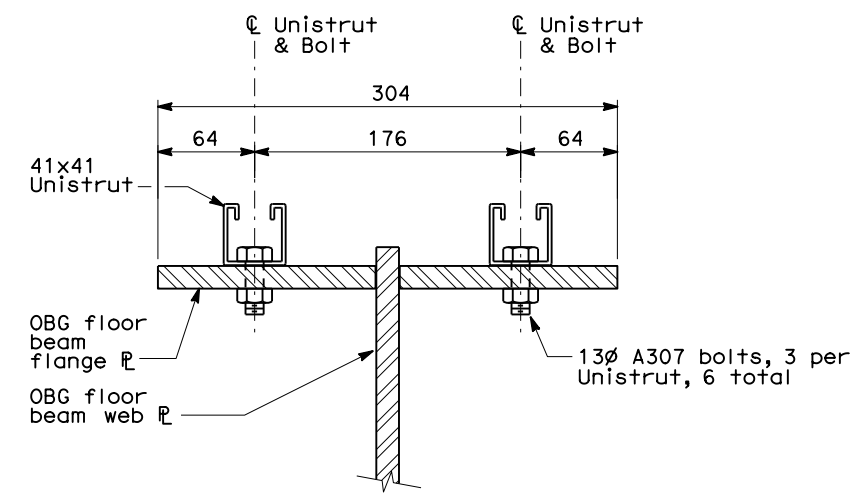
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9	86 S41	1204
REGISTERED CIVIL ENGINEER			10/09/13		
PLANS APPROVAL DATE			No. 71894		
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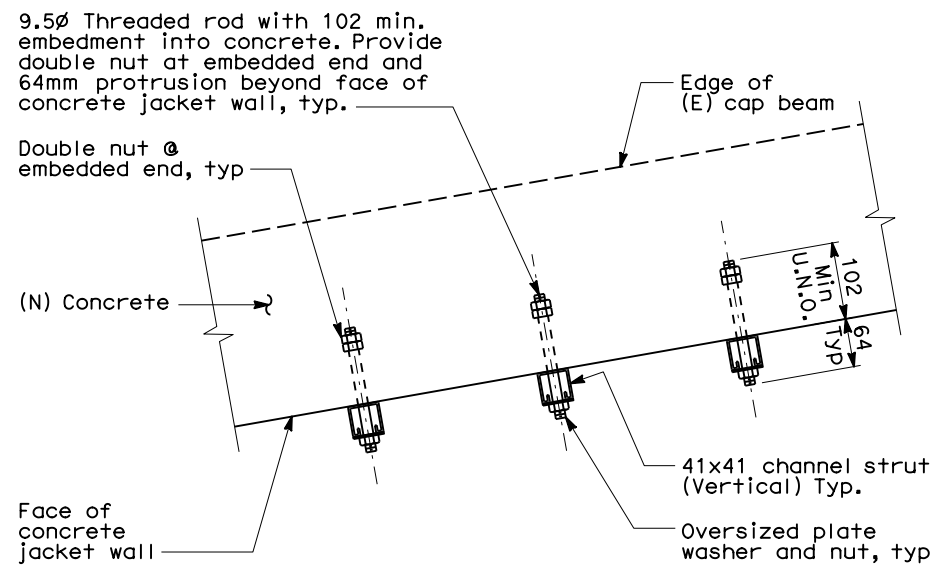
**STRONG MOTION SENSOR ENCLOSURE
INSIDE OBG @ PP 127.5**
SCALE: 1:10



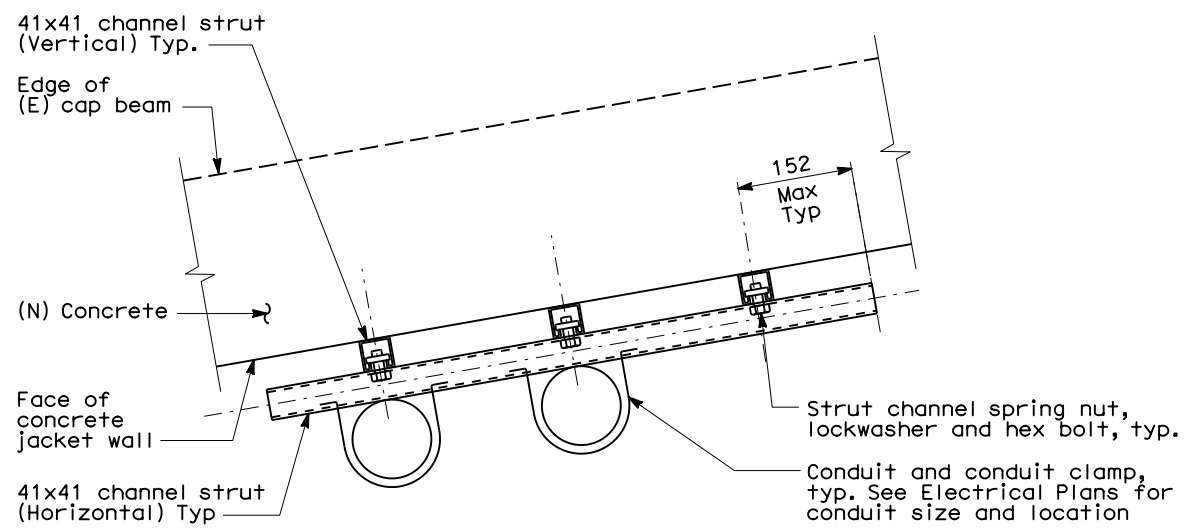
SECTION A
SCALE: 1:5

NOTES:

1. Contractor shall ensure all embedded anchors are aligned along a straight vertical line. Embedded anchors shall not conflict with Saddle Assembly, PT ducts pr concrete jacket wall reinforcement.
2. All embedded anchors and channel struts shall be hot-dipped galvanized.
3. Connection at concrete jacket wall is shown, connection at soffit beam is similar.
4. Pull box shall be attached to horizontal channel struts using strut channel spring nut, lockwasher and hex bolt.



**EMBEDDED ANCHOR AND VERTICAL CONDUIT
SUPPORT CHANNEL STRUT CONNECTION DETAIL**
SCALE: 1:10



**HORIZONTAL CONDUIT SUPPORT CHANNEL
STRUT AND CONDUIT ATTACHMENT DETAIL**
SCALE: 1:10

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE					
10/28/13	ADDITIONAL ELECTRICAL CHANGES	SAS MISCELLANEOUS	SAM	JZ	191S2
MARK	DATE	DESCRIPTIONS	BY	CH'D	CCO#
REVISIONS					

CONTRACT CHANGE ORDER NO. _____
SHEET _____ OF _____

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN	BY	S. Mohammed	CHECKED	J. Zandian	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 34-0006	SAS/SKYWAY SUPERSTRUCTURE GIRDER CONDUIT/CABLE TRAY SUPPORT DETAIL - SHEET 5 OF 5	AS-35D			
	DETAILS	BY	E. Llorico	CHECKED					J. Zandian		
	QUANTITIES	BY		CHECKED							
DESIGN DETAIL SHEET (METRIC) (REV. 3/1/98)						CU 04251 EA 0120F1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET	OF